EMBRACING NATURE

ANNUAL REPORT 2020/2021

NATIONAL PARKS

Clementi Forest

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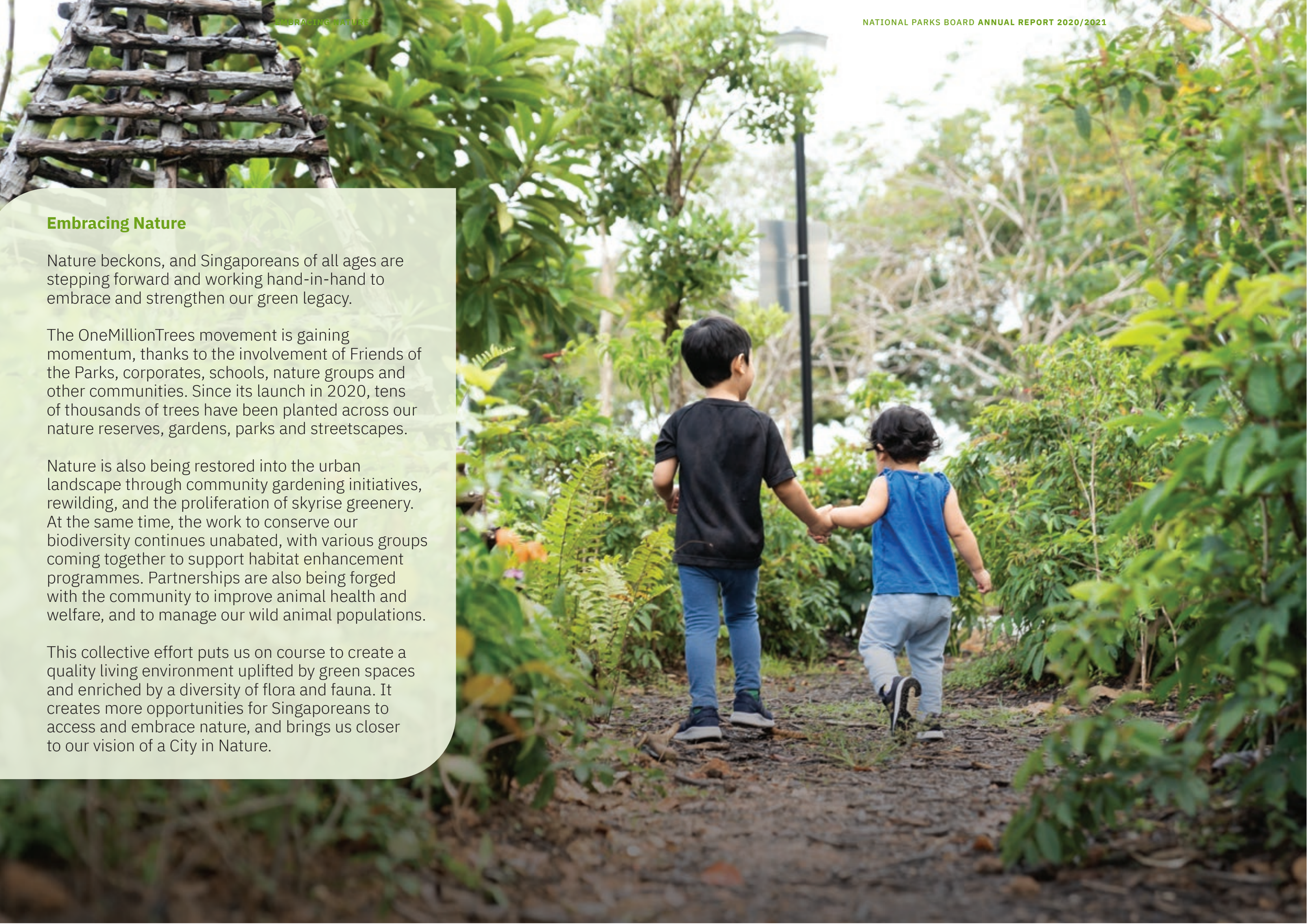


Embracing Nature

Nature beckons, and Singaporeans of all ages are stepping forward and working hand-in-hand to embrace and strengthen our green legacy.

The OneMillionTrees movement is gaining momentum, thanks to the involvement of Friends of the Parks, corporates, schools, nature groups and other communities. Since its launch in 2020, tens of thousands of trees have been planted across our nature reserves, gardens, parks and streetscapes.

Nature is also being restored into the urban landscape through community gardening initiatives, rewilding, and the proliferation of skyrise greenery. At the same time, the work to conserve our biodiversity continues unabated, with various groups coming together to support habitat enhancement programmes. Partnerships are also being forged with the community to improve animal health and welfare, and to manage our wild animal populations.

This collective effort puts us on course to create a quality living environment uplifted by green spaces and enriched by a diversity of flora and fauna. It creates more opportunities for Singaporeans to access and embrace nature, and brings us closer to our vision of a City in Nature.

CHAIRMAN'S MESSAGE

> "To be meaningful and sustainable, a City in Nature requires a change in our internal or inner landscape of values, attitudes, social practices and a habit of caring for each other and for Nature. It is ultimately about a quality of life and this is defined not by what we think it is, but by how we actually live it."

This past year was dominated by the challenges arising from the COVID-19 pandemic. Notwithstanding this, it was also the year that we sought as a country to look beyond the pandemic and proceeded to launch the Singapore Green Plan 2030.

This Plan sets an agenda for sustainable development to mitigate the impact of climate change. It is bold, ambitious and aspirational with defined targets and conceived to involve a whole-of-nation effort. The vision of a City in Nature driven by NParks is one of the five pillars of this Singapore Green Plan.

Achieving a City in Nature would invariably have a bearing on all aspects of our lives. The reach of a City in Nature goes beyond the material or external landscape, whether it is the mitigation of the urban heat island effect, or the extension of cycling tracks which includes our Park Connector Network, or enhancing ecological resilience with greater biodiversity. To be meaningful and sustainable, a City in Nature requires a change in our internal or inner landscape of values, attitudes, social practices and a habit of caring for each other and for Nature. It is ultimately about a quality of life and this is defined not by what we think it is, but by how we actually live it.

So while one City in Nature target is ensuring that every household is just a 10-minute walk from a park, this would be meaningful only if more and more Singaporeans actually visit these parks and enjoy them. Gratefully one of the positive things we have found in this pandemic is how Singaporeans during this stressful period discovered and found comfort and relief in Nature – visitorship of our community parks grew phenomenally.

We observed that in the course of their visits, many Singaporeans found a new or renewed connection with Nature, taking pride in Singapore's biodiversity, finding satisfaction growing edibles, discovering mental wellness through just being in touch with Nature. They essentially experienced firsthand what 40 years of studies have pointed to – that greenery and holistic health are interconnected.

Our people's appreciation of greenery and Nature is now probably greater than ever. The OneMillionTrees movement that seeks to restore Nature through the planting of more than a million trees across Singapore over 10 years gained rapid traction throughout this past year. As of March 2021, close to 107,000 trees have been planted across our nature reserves, gardens, parks and streetscapes.

The relationship between people and Nature is the pivot determining what a City in Nature must ultimately mean for Singaporeans. In 2009, the United Nations General Assembly proclaimed 22 April as International Mother Earth Day, and acknowledged that it is necessary to promote harmony with Nature in order to achieve a just balance among the economic, social and environmental needs of present and future generations – "We, along with the rest of the natural world, are interconnected within the larger web of life."

Hence another of the targets of the City in Nature agenda in the Green Plan is to work with communities and non-government organisations to develop programmes to allow people and wildlife to live in harmony. Community engagement and public education are key. In the past year, we have continued our engagement with the public, working particularly with the community and youths on projects such as the upcoming Clementi Nature Corridor. This was conceptualised by taking into account the ecological profile of the area, and highlights the delicate balance we have to maintain between development and conservation.

As we worked through the year in the midst of the pandemic, we realised many opportunities and lessons to be learnt in the face of this adversity. One of them is how interconnected and interdependent life is in a modern urban society like Singapore.

The lockdown that the pandemic imposed provided a unique natural opportunity for us to study the role of human activities and their effects on Nature. In Singapore, our studies showed how the reduction of human food sources (closure of food outlets) led to a reduction in feral pigeon population. This reinforces the view that efforts in addressing food waste and enforcement against littering and illegal bird-feeding are significant to managing the population of pest birds in the community.

The disruptions to operations and manpower caused by the pandemic also underscored the old adage of necessity being the mother of invention. Our officers grappled to adapt and innovate, quickly leveraging technologies in collaboration with stakeholders and Institutes of Higher Learning. For example, by piloting the use of the Remote Tree Measurement System and automatic fault reporting systems, they reduced the hitherto heavy reliance on manpower.

Such efforts to harness science and technology saw NParks recognised with the Business Transformation Award at the 2020 Public Service Transformation Awards. Internationally, NParks received the Geospatial World Excellence Award and was judged the champion in e-Environment by the United Nations World Summit on the Information Society.

While our officers do and should rightly take pride in such achievements and accolades, I suspect that if you ask them individually, you will find that typically their personal source of meaningful satisfaction comes from seeing what they do being enjoyed by Singaporeans and their families – and that the Singaporean's growing love of, and attachment to, Nature would be his or her best and most lasting reward.

To the members of public who came forward to enjoy our programmes, visited our parks, gave us feedback or just grew edibles from the seeds we distributed, and to our volunteers who joined us tirelessly in our work, please let me say, on behalf of all NParks staff, a very heart-felt "Thank You".

Mr Benny Lim
Chairman, National Parks Board

Members of the Board

(As of September 2021)

Benny Lim
Chairman

Mr Lim was Permanent Secretary of the Ministry of National Development from 2011 to 2016. He held concurrent appointments as Permanent Secretary in the Prime Minister's Office and for National Security and Intelligence Coordination. Prior to that, he was Permanent Secretary of the Ministry of Home Affairs from 2005 to 2011. He retired from the civil service in 2016. Mr Lim is presently Chairman of Temasek Foundation and also serves as a special advisor to the Centre for Liveable Cities (MND) and to the National Security Studies Programme, RSIS (NTU). He was awarded the Meritorious Service Medal in 2010 and the Distinguished Service Order in 2021.

Guy Harvey-Samuel
Board Member

Mr Harvey-Samuel was formerly Group General Manager and Chief Executive Officer of The Hongkong and Shanghai Banking Corporation Limited (HSBC) Singapore, and subsequently its non-executive Chairman. He is currently Chairman of the Capella Hotel Group Pte Ltd and Board of Trustees of the National Youth Achievement Awards Council as well as a member of the boards of Surbana Jurong Private Limited, Mapletree Industrial Trust Management Ltd, M1 Limited and Wing Tai Holdings. He is also a member of the Asia Sustainable Infrastructure Advisory Panel chaired by Minister Indranee Rajah, Minister in the Prime Minister's Office.

George Huang
Board Member

Mr Huang is Managing Director of Amoy Canning Corporation (S) Ltd, a pioneer in the food processing industry in Asia. An active leader and contributor in business and the community, he serves on the boards and committees of various organisations including Singapore Manufacturing Federation, Singapore Business Advisors & Consultants Council and Singapore Agro-Food Enterprises Federation Limited. He was also formerly the Honorary Consul General of the Federal Democratic Republic of Ethiopia to Singapore.

Cheng Hsing Yao
Board Member

Mr Cheng is Chief Executive Officer of GuocoLand Group and a director of Eco World International Berhad. Prior to that, he held leadership positions at the Centre for Liveable Cities and Urban Redevelopment Authority. He co-chairs the Building and Construction Authority's Integrated Digital Delivery Steering Committee and Central Procurers Panel, and is a member of URA's Design Advisory Committee and Heritage and Identity Partnership. He also sits on the executive committee of the Urban Land Institute Singapore and the management board of the Institute of Real Estate and Urban Studies, National University of Singapore. In January 2021, Mr Cheng was appointed by the President of the Republic of Singapore as a Nominated Member of Parliament.

Ms Shantini Ramachandra
Board Member

Ms Shantini is the Southeast Asia Tax Leader for Deloitte Private. She has a Bachelor of Laws degree from the National University of Singapore and a Master of Laws degree from the University of London, King's College. She has been admitted as an Advocate and Solicitor of the Supreme Court of Singapore and is also an Accredited Tax Advisor (Income Tax) with the Singapore Institute of Accredited Tax Professionals Limited. Ms Shantini practised law in the area of commercial and corporate law before joining a Big Four accounting firm and has about 20 years of international tax experience.

Musa Fazal
Board Member

Mr Musa is a Senior Director of the Futures, Strategy and Plans Division in the Ministry of Trade and Industry where he oversees strategic planning activities, from sensing and sense-making, to strategy development, work planning, strategic resourcing, and inter-agency coordination to transform Singapore's economy. He is currently a member of the Industrial Arbitration Court's Employer Panel. Prior to this, he has served in various agencies in the public service, including SkillsFutureSG, Ministry of Manpower, Ministry of Finance and Monetary Authority of Singapore.

Professor David Chan
Board Member

Prof Chan is Professor of Psychology at the Singapore Management University and Adjunct Principal Scientist and Scientific Advisor at A*STAR. A 2020 study by Stanford University on researcher impact among scientists across all disciplines named him in the top 1% worldwide. He is Elected Fellow of six international psychological associations and has received numerous international achievement awards. Together with Economics Nobel Laureate Daniel Kahneman, he served on an international committee who authored a report on national well-being across countries, which was incorporated by the United Nations in its Human Development Report. He has served on numerous national councils and boards, and is currently a member of the Social Science Research Council, Diabetes Prevention and Care Taskforce and Singapore-Japan Joint Committee on Science and Technology, and Chairman of the Selection Panel for the A*STAR Social Sciences Innovation Seed Fund.

Ms Tham Loke Kheng
Board Member

Ms Tham is CEO and Board Director of Mediacorp. A media industry veteran, she has held leadership roles in broadcast, media and telecommunications services in leading Asian companies. In September 2017, Ms Tham returned to Mediacorp as CEO, coming full circle to the organisation where she started her career. Prior to that, she was Head of Content and Marketing at StarHub, President of Taiwan Broadband Communications and Head of NOW TV, the largest Pay TV operator in Hong Kong. Ms Tham is also a Board Director of the Singapore Chinese Cultural Centre.

Gerald Tan Kwong Ming
Board Member

Mr Tan is the Head of Reputational Risk, Asia-Pacific for Credit Suisse. He has over 20 years of international experience in legal private practice, banking and risk management. He is a member of the Advisory Board of the National Museum of Singapore. He has also previously served as a board member of Gardens by the Bay and Credit Counselling Singapore, and as Co-Chair of the Asia Pacific Commodities Committee of the International Swaps and Derivatives Association, Inc.

Ms Nur Hidayah Abu Bakar
Board Member

Ms Nur Hidayah is Dean of the Faculty of Design at LASALLE College of the Arts, Singapore. She is a member of the Museum Education Advisory Panel at National Gallery Singapore and the Monetary Authority of Singapore's Singapore Note and Coin Advisory Committee. She believes in the interconnectedness of design aesthetics, education and industry/community, and has initiated several partnerships with Asian communities to develop design capability programmes and support social enterprises that promote a more inclusive design culture. She has also led the research and study of design cultures in contemporary Asian cities such as Singapore, Seoul and Shanghai.

Kenneth Er
Board Member and
Chief Executive Officer

Mr Er joined NParks in 1997 and was actively involved in the planning, implementation and management of our parks and streetscapes. In 2003, he was posted to the Ministry of National Development's Infrastructure Division where his work included overseeing policy formulation and review of legislation pertaining to greenery infrastructure as well as issues in the agri-veterinary and building and construction sectors. On his return to NParks, he took on the concurrent roles of Assistant CEO (Corp Dev and Services) and General Manager for the development of Gardens by the Bay. In 2012, Mr Er took on the role of Chief Operating Officer of Gardens by the Bay. He was appointed Chief Executive Officer of NParks in February 2014.

MANAGEMENT TEAM

From left to right

Dr Adrian Loo
Group Director, Wildlife Management and Senior Director, Community Projects

Ms Ang Wei Ping
Group Director, Policy & Planning

Dr Leong Chee Chiew
Executive Director, National Parks, Gardens & Nature Reserves Cluster and Commissioner of Parks & Recreation

Dr Kiat W Tan
Advisor to NParks

Kenneth Er
Chief Executive Officer

From left to right

Dr Chang Siow Foong
Group Director, Professional & Scientific Services

Francis Lim
Group Director, Corporate Services

Tan Chong Lee
Assistant Chief Executive Officer, Corporate Development & Services Cluster

Chuah Hock Seong
Group Director, Parks West and Associate Director, CUGE

Ms Sophianne Mohd Araib
Group Director, Corporate Strategy & Planning, Parks Central and Horticulture & Community Gardening*

* From 16 November 2021

From left to right

Yeo Meng Tong
Senior Director, Design Research & Development and Associate Director, CUGE

Dr Yap Him Hoo
Deputy Chief Executive Officer, Professional Development & Services Cluster and Director-General, Animal & Veterinary Service Cluster

Ng Cheow Kheng
Group Director, Horticulture & Community Gardening*

Lim Teck Lee
Group Director, Industry/CUGE

* Until November 2021

From left to right

Chia Seng Jiang
Group Director, Parks East

Ms Tan Lai Kheng
Senior Director, Lifestyle Business

Tang Tuck Weng
Assistant Chief Executive Officer, Park Management & Lifestyle Cluster

Lim Liang Jim
Group Director, Conservation

From left to right

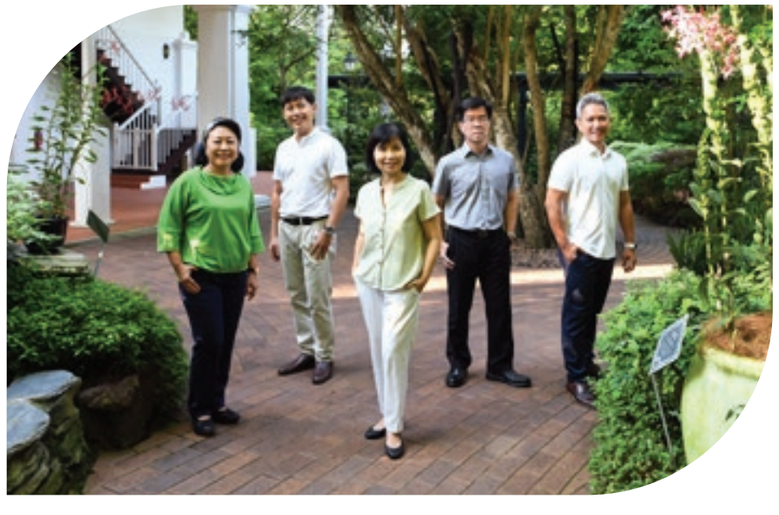
Bin Hee Jum
Group Director, Finance & Procurement

Dr Lena Chan
Senior Director, International Biodiversity Conservation

Kong Yit San
Executive Director, Jurong Lake Gardens

Dr Chua Tze Hoong
Group Director, Industry & Biosecurity Management

Dr Tan Puay Yok
Group Director, Singapore Botanic Gardens



From left to right

Ms Kartini Omar
Group Director, Parks Development and Jurong Lake Gardens

Ryan Lee
Group Director, National Biodiversity Centre and Fort Canning Park & Istana and Senior Curator, Istana

Ms Lee Pin Pin
Group Director, Communications & Community Engagement

Oh Cheow Sheng
Group Director, Streetscape

Damian Tang
Senior Director, Design

The Management Team photos were taken at the National Orchid Garden and Gallop Extension, Singapore Botanic Gardens.
Not in picture: Ms Jessica Kwok, Group Director, Community Animal Management

Organisation Structure

(As of September 2021)

Kenneth Er
Chief Executive Officer

Dr Kiat W Tan
Advisor to NParks

Tan Choon Lin
Director
Internal Audit*

Tan Chong Lee
Assistant Chief Executive Officer
Corporate Development & Services Cluster

- **Ms Lee Pin Pin** (Concurrently as QSM), Group Director, Communications & Community Engagement
  - **Ms Tracy Won**, Director, Communications
  - **Ms Ng Li-San**, Director, Communications
  - **Ms Gina Leong**, Director, Community Engagement
  - **Ms Ng Hui Bing**, Director, Community Engagement
  - **Ms Jacqueline Teo**, Director, Garden City Fund
- **Francis Lim**, Group Director, Corporate Services
  - **Lew Chee Keong**, Director, Facilities Mgt & Facilities (Singapore Botanic Gardens, Fort Canning Park & Jurong Lake Gardens)
  - **Ms Chang Siau Hoon**, Director, Human Resource
  - **Foong Chee Leong**, Director, IT
  - **Ms Elaine Phua**, Director, Legal
  - **Mrs Tan-Yan Oi Chee**, Chief Records Officer, Office Administration
- **Ms Sophianne Mohd Araib**, Group Director, Corporate Strategy & Planning
  - **Ms Trina Chua**, Director, Corporate Policy & Planning
  - **Lim Kian Loo**, Director, Emergency Planning & Risk Management
- **Bin Hee Jum**, Group Director, Finance & Procurement
  - **Ms Lim Bee Peng**, Financial Controller, Finance
  - **Danny Tan**, Acting Director, Procurement
- **Dr Adrian Loo**, Senior Director, Community Projects

Dr Yap Him Hoo
Deputy Chief Executive Officer
Professional Development & Services Cluster

- ****Ng Cheow Kheng**, Group Director | *****Ms Sophianne Mohd Araib**, Group Director, Horticulture & Community Gardening
  - **Ms M Pungkothai Kay**, Director, Community in Bloom & Skyrise Greenery
  - **Ms Lilian Kwok**, Director, Nursery & Horticulture Outreach
  - **Ms Shirley Ling**, Director, HortPark
  - **Ms Jenny Yap**, Director, Plant Science & Health
- **Lim Teck Lee**, Group Director, Industry/CUGE
  - **Chuah Hock Seong**, Associate Director, CUGE (Concurrently CEO, Singapore Garden City Pte Ltd)
  - **Yeo Meng Tong**, Associate Director, CUGE
  - **Chong Whye Keet**, Director, CUGE (Industry Development)
  - **Shamril bin Jamil**, Director, CUGE (Manpower Development)
  - **Dr Nigel Goh**, Director, CUGE Research
- **Dr Lena Chan**, Senior Director, International Biodiversity Conservation
  - **Ms Wendy Yap**, Director, International Biodiversity Conservation
- **Ryan Lee**, Group Director, National Biodiversity Centre
  - **Dr Geoffrey Davison**, Director, Terrestrial
  - **Dr Karenne Tun**, Director, Terrestrial
  - **Ms Cheryl Chia**, Acting Director, Biodiversity Information & Outreach
  - **Dr Karenne Tun**, Director, Coastal & Marine
- **Ms Ang Wei Ping**, Group Director, Policy & Planning
  - **Ms Emelyne Looi**, Director, Greenery & Development Planning
  - **Ms Stephanie Ng**, Director, Park Planning Central
  - **Vacant**, Director, Park Planning East
  - **Cheong Kok Hwee**, Director, Park Planning West
- **Oh Cheow Sheng**, Group Director, Streetscape
  - **Tee Swee Ping**, Coordinating Director, Streetscape
  - **Abdul Hamid bin Mohd**, Director, Arboriculture
  - **Lee Jia Hwa**, Director, Streetscape (Landscape)
  - **Chan Chung Leong**, Director, Streetscape (North East)
  - **Jeff Seow**, Director, Streetscape (South East)
  - **Bryan Yeo**, Director, Streetscape (North West)
  - **Ms Ow Siew Ngim**, Director, Streetscape (South West)
  - **Lu Jilun**, Acting Director, Streetscape (Central North)
  - **Eric Ong**, Director, Streetscape (Central South)
  - **Ms Ow Siew Ngim**, Director, Ops Tech
- **Sehker Warrier**, Director, Prosecution & Enforcement

Tang Tuck Weng
Assistant Chief Executive Officer
Park Management & Lifestyle Cluster

- **Damian Tang**, Senior Director, Design
  - **Jason Matthew Wright**, Director, Design
- **Yeo Meng Tong**, Senior Director, Design Research & Development
- **Ms Sophianne Mohd Araib**, Group Director, Parks Central
  - **Ms Nanthini d/o Elamgovan**, Acting Director, Parks (Central North)
  - **Mervyn Tan**, Acting Director, Parks (Central South)
- **Chia Seng Jiang**, Group Director, Parks East
  - **Ms Kalthom bte Abd Latiff**, Director, Parks (North East)
  - **Tan Jun Chao**, Director, Parks (South East)
- **Chuah Hock Seong**, Group Director, Parks West
  - **Tay Boon Sin**, Director, Parks (North West)
  - **Yee Chung Yao**, Director, Parks (South West)
  - **Joseph Chua**, Director, Parks (Special Projects)
- **Ms Kartini Omar**, Group Director, Parks Development
  - **Ms Ang Chiean Hong**, Director, Development Management 1
  - **Ms G Kannagi**, Director, Development Management 2
- **Ms Tan Lai Kheng**, Senior Director, Lifestyle Business
  - **Ms Claire Ng**, Director, Lifestyle Business
- **Ms Wendy Seah**, Director, Programming & Events

Dr Leong Chee Chiew
(Commissioner of Parks & Recreation)
Executive Director
National Parks, Gardens & Nature Reserves Cluster

- **Lim Liang Jim**, Group Director, Conservation
  - **Ms Sharon Chan**, Director, Bukit Timah Nature Reserve
  - **Ling Han**, Director, Central Catchment Nature Reserve
  - **Robert Teo**, Director, Pulau Ubin
  - **Ms Yang Shufen**, Director, Sungei Buloh
- **Dr Adrian Loo**, Group Director, Wildlife Management
  - **Dr Anna Wong**, Director, Wildlife Trade
  - **How Choon Beng**, Director, Wildlife Management & Outreach
  - **Vacant**, Director, Wildlife Management Research
  - **Dr Anna Wong**, Director, Centre for Wildlife Rehabilitation
- **Ryan Lee**, Group Director, Fort Canning Park & Istana
  - **Koh Poo Kiong**, Director, Fort Canning Park
  - **Ng Boon Gee**, Director, Development Management (Nature Parks, Gardens & Nature Reserves)
  - **Ryan Lee**, Senior Curator, Istana
- **Dr Tan Puay Yok**, Group Director, Singapore Botanic Gardens
  - **Dennis Lim**, Coordinating Director, Festivals, Events & Exhibitions and Visitor Management & Security
  - **Dr Thereis Choo**, Coordinating Director, Living Collections and Facilities Management and Centre Director/Forest Discovery Centre
  - **Dr David Middleton**, Coordinating Director, Research & Conservation and Keeper of Herbarium
  - **Ms Terri Oh**, Director, Education
  - **Ms Leong Cheng Yee**, Director, Events & Exhibitions

Kong Yit San
Executive Director
Jurong Lake Gardens

- **Ms Kartini Omar**, Group Director, Jurong Lake Gardens
  - **Ms Nah Bee Luan**, Director, Jurong Lake Gardens Development
  - **Koh Soon Kiong**, Director, Jurong Lake Gardens Operations

Dr Yap Him Hoo
Director-General
Animal & Veterinary Service Cluster

- **Dr Chang Siow Foong**, Group Director, Professional & Scientific Services
  - **Ms Irene Liu**, Director, Planning & Quality Assurance
  - **Dr Charlene Judith Fernandez**, Director, Centre for Animal & Veterinary Sciences
  - **Dr Audrey Chen**, Director, Centre for Animal Rehabilitation
  - **Dr Diana Chee**, Director, Animal & Veterinary Programme Office
  - **Dr Kelvin Lim**, Director, Veterinary Health Management
- **Ms Jessica Kwok**, Group Director, Community Animal Management
  - **Joshua Teoh**, Director, Animal Population Management
  - **Joshua Teoh**, Director, Animal Welfare
  - **Sebastian Tan**, Acting Director, Pet & Street Animal Management
- **Dr Chua Tze Hoong**, Group Director, Industry & Biosecurity Management
  - **Wang Ming Yuan**, Director, Licensing & Compliance
  - **Poh Yew Kwang**, Director, Biosecurity & Quarantine Services

* Internal Audit reports functionally to the Audit Committee

** Until November 2021

*** From 16 November 2021

NATURE FOR ALL

NParks is establishing world-class gardens and parks and restoring nature into the urban landscape as we work with the community to transform Singapore into a City in Nature.

More than a Million Trees for a Quality Living Environment

As Singapore transforms into a City in Nature, efforts to further extend nature into our urban landscape have intensified. The OneMillionTrees movement, launched in 2020, is a nationwide effort driven by the community with NParks' support to plant a million more trees across Singapore by 2030.

Partners from the Friends of the Parks communities, schools, nature groups and community groups have championed initiatives surrounding the tree-planting efforts. Despite challenges brought on by the COVID-19 pandemic, more than 6,400 people from all walks of life participated in the movement during the year under review.

As of 31 March 2021, close to 107,000 trees have been planted across our nature reserves, gardens, parks and streetscapes. This includes many native plants that were chosen for various characteristics, such as vibrant flowers, attractive foliage, low maintenance, drought-tolerance, and suitability as a food source for native biodiversity. Community nurseries have also been established so that our partners can be involved in the process of nurturing native trees for planting.

Corporates have committed to contribute to this movement through NParks' registered charity, the Garden City Fund. For example, on Jurong Island, trees are being planted through the charity's Plant-A-Tree programme to help mitigate the urban heat island effect. This means cooler temperatures with improved air quality and a more beautiful living and conducive work environment for all. As of 31 January 2021, close to 39,000 trees have been planted at these sites.

SCAN QR CODE TO LEARN MORE ABOUT THE BENEFITS OF TREES:

WHY PLANT TREES?

Trees play an important role in enhancing the living environment for all Singaporeans. How so?

1. Trees green the city state, reducing the urban heat island effect and air pollution
2. Trees store carbon to help mitigate the effects of climate change
3. Trees provide food and habitats for wildlife
4. Trees make Singapore a more pleasant and sustainable place to live in

01 The OneMillionTrees Movement aims to redouble efforts to green our urban infrastructure on an unprecedented scale, to achieve the vision of making Singapore a City in Nature.

01

Rewilding for Naturalistic Landscapes

In November 2020, NParks opened the 1.76 km Lornie Nature Corridor. It is made up of a Nature Way, park connector and a buffer to the Central Catchment Nature Reserve. The corridor was planted up with many native tree species in a multi-tiered manner. Over time, the trees will grow and form a forested corridor to buffer the nature reserve, restoring nature into the highly urbanised area.

This nature corridor is a site under the newly launched NParks Rewilding Plan that involves introducing more naturalistic landscapes by planting native trees and shrubs as well as some common and naturalised wildflowers in selected areas.

Nature Ways not only strengthen the ecological connectivity between green spaces to sustain a healthy natural ecosystem, they also bring nature closer to residents and make the streets more pleasant for walking or cycling.

In 2020, NParks rolled out 20 km of Nature Ways, bringing the total distance of Nature Ways to 150 km. Other stretches that were implemented include Nature Ways in Keat Hong, Pasir Panjang, West Coast, Bedok and Pasir Ris, with the target to make every road a Nature Way eventually.

02

03

02 The old seven-lane Lornie Road has been converted to a dual two-lane road. Part of the old road was reclaimed to create the new Lornie Nature Corridor.

03 Prime Minister Lee Hsien Loong participating in a tree planting activity, an important annual tradition that dates back to 1963.

WHAT ARE NATURE WAYS?

Nature Ways are multi-tiered plantings with specially selected trees and shrubs to facilitate the movement of fauna between green spaces. The four layers in a Nature Way are:

1 EMERGENT LAYER
Trees here provide food for canopy-dwelling insectivorous birds and nesting sites for eagles and other raptors.

2 CANOPY LAYER
These trees, some of which are flowering species, provide shelter and food for insectivorous as well as nectar-loving birds and butterflies.

3 UNDERSTOREY LAYER
Trees here produce small berries that are a food source for frugivorous or fruit-loving birds. Some are also host plants for butterflies.

4 SHRUB LAYER
Flowering shrubs here provide nectar for butterflies and birds, are host plants for butterflies and provide a habitat for insects and spiders. Their colourful flowers are a visual treat to pedestrians and road users.

NParks is also targeting to build 500 km of park connectors by 2030. As at end March 2021, some 360 km of park connectors have been completed, including the Changi Coastal Park Connector Extension which provides an important link between Changi Airport and East Coast Park. NParks will continue to expand the Park Connector Network to ensure that more communities can access nature easily. With this, all households will be within a 10-minute walk from a park, by 2030.

Our streets and park connectors are getting prettier and more colourful. All across our island, you can spot flowering species such as the (01) Trumpet Tree (*Tabebuia rosea*) with its sakura-like blooms of pink, (02) Bougainvillea (*Bougainvillea* species and varieties) whose bracts come in colours such as magenta, white and orange, and the (03) Sandpaper Vine (*Petrea volubilis*), a woody climber with pale blue to violet flowers often planted along sheltered walkways.

Restoring Nature into the Built Environment

Skyrise greenery enables developers and building owners to implement more greenery within Singapore's limited space. Greenery not only cools buildings and makes them more comfortable to live, work and play in, it also softens their appearance and strengthens our role as a world leader in vertical greening. In the year in review, 11 buildings were awarded incentives to implement skyrise greenery, and 12 hectares of rooftop greenery and vertical greenery were added, keeping NParks on track to achieve the target of 200 hectares of skyrise greenery by 2030.

Since its inception in 2009, the Skyrise Greenery Incentive Scheme has benefitted 268 buildings and helped contribute to the 132 hectares of skyrise greenery in Singapore. To inspire more building owners to come on board the initiative, NParks published the Skyrise Greenery Showcase e-guide to highlight developments that have benefitted from the scheme.

As part of our national greening efforts, NParks completed landscape works for four MRT stations in 2020, bringing the total number of MRT stations greened to 75. Commuters can also admire the pretty trellis climbers planted along about 14.5 km of covered linkways.

01

02

03

THE STORY OF NATIVE FORESTS

Singapore's landscape features a rich palette of green cover. Our native vegetation is the tropical rainforest and the most ecologically diverse of this – the primary rainforest – can be found in places such as the Bukit Timah Nature Reserve and Central Catchment Nature Reserve.

The primary rainforests are often fringed by mature secondary forests with a rich diversity of native species. Examples of these can be found in the Central Catchment Nature Reserve and the Dairy Farm, Hindhede and Windsor Nature Parks.

There are also younger secondary forests which are dominated by native pioneer species. For example, the Adinandra belukar is a secondary forest found in areas where past agricultural activities have resulted in degraded soil. Hence, they tend to be dominated by species that are able to thrive in such conditions.

Besides these, there are stretches of greenery populated by exotic species which have taken root on land that has been left fallow. These include grasslands and scrublands dominated by weeds such as Guinea Grass (*Urochloa maxima*) and Mimosa (*Mimosa pudica*), and young forests dominated by fast-growing non-native species such as Albizia (*Falcataria moluccana*), Lead Tree (*Leucaena leucocephala*) and the Snake Tree (*Cecropia pachystachya*).

The non-native species tend to dominate young forest growth and crowd out native trees. Albizias, for example, can grow up to 4 m a year, unlike the native Kempas (*Koompassia malaccensis*) which grows about 1 m. They also pose a safety issue because of their short life span, shallow root system and brittle wood structure which makes their branches more prone to snapping.

04

In prioritising Singapore's conservation efforts, NParks is cognisant of these different shades of green and continues to be guided by science. Different conservation strategies will be applied in various areas, depending on the size and type of vegetation and ecological connectivity to other green spaces.

Core biodiversity areas are protected as nature reserves, and buffer areas have been established to protect them from abutting developments.

Under the Forest Restoration Action Plan, which is part of Singapore's Nature Conservation Masterplan, ecological processes and biodiversity in our native rainforests are being restored and enhanced with the help of the community. For example, nitrogen-fixing species are being planted to improve the soil conditions and exotic weeds that compete with our native species are being removed.

Meanwhile, exotic species which prevent native species from taking root will have to be managed, and tracts of exotic-dominated secondary vegetation may have to give way to competing demands for land use.

It is important, therefore, to look at our nature areas as a whole and adopt a strategic, science-based approach that will ensure sustainability in our efforts to protect Singapore's natural heritage.

SCAN QR CODE TO LEARN MORE ABOUT THE STORY OF NATIVE FORESTS:

04 Did you know that tropical rainforests, like those found in Bukit Timah Nature Reserve, play an important role in removing carbon dioxide and can help prevent extreme weather systems like floods and droughts?

01 The Growing with Edibles seed packets contain a plant care sheet in four languages, seeds for one type of leafy vegetable such as Xiao Bai Cai, Cai Xin and Kang Kong, and one type of fruited vegetable such as (02) Tomato, Brinjal and Lady's Finger.

03 Second Minister for National Development & Finance Indranee Rajah (right) admiring the plantings at HortPark with a community gardener after the Community Garden Edibles Competition Award ceremony.

Growing Our City in Nature

Everyone can now participate in growing our City in Nature, thanks to the launch of the Gardening with Edibles initiative in June 2020. 400,000 free packets of leafy and fruited vegetable seeds were distributed to households to kickstart their home gardens.

This initiative encourages Singaporeans to grow edibles at home and bring nature indoors. It also meets a growing interest in the community to use their harvest to cook their favourite dishes and contributes towards food resilience, part of Singapore's 30 by 30 goal that aims to produce 30% of our nutritional needs locally by 2030. Another 60,000 beginner-friendly seed packets were distributed at the Community Garden Festival in October 2020 to meet this interest.

In addition to rolling out a suite of online engagement and resources such as Facebook Live sessions, videos and masterclass lessons, edibles-growing workshops were conducted for the community.

Launched in 2005, the Community in Bloom (CIB) programme continues to grow to a strong network of more than 1,600 community gardens involving over 40,000 gardening enthusiasts. CIB gardeners' skills in growing a variety of edibles have also been steadily honed since 2017 as part of the Edible Horticulture Masterplan. Today, many of them actively share their harvests as part of community outreach events. For example, at the biannual Gardeners' Get-Together event at Choa Chu Kang Park, CIB gardeners had a mass harvest of their edible produce which they donated to nearby social services organisations.

To cater to increasing interest from avid gardeners, more than 500 new allotment garden plots were opened for online application in end 2020. The plots are located in Bedok Reservoir Park, East Coast Park, Lower Seletar Reservoir Park and one-north Park, among others. There are more than 1,700 allotment garden plots in 20 parks. In an effort to enable the very young to enjoy nature, CIB collaborated with My First Skool pre-school centres to offer hands-on garden-designing sessions for educators, so that they can set up community gardens for the children.

Reflecting the wide base of support it enjoys in the community, more than 460 entries were received for the Community Garden Edibles Competition held in March 2021. The competition involved distributing 3,000 seed packets of more challenging edible varieties to interested members of the public. Participants then submitted the produce which they grew from the seeds. Winning entries were selected based on their size and weight.

Connecting Digitally During COVID-19

NParks shifted its engagement efforts to digital platforms during the COVID-19 pandemic to reach out to the community amidst restrictions on physical events. We launched a refreshed YouTube channel, producing more than 120 new videos, to meet the strong demand for gardening and greenery-related content.

Videos included tutorials on growing edibles, DIY gardening tips, pet-related craft activities as well as virtual tours of our green spaces. We also worked with content creators on various platforms to share our message with a diverse audience, enabling all residents to continue to enjoy the restorative power of nature even while staying at home.

In compliance with safe distancing measures, signature events such as Gardeners' Day Out and concerts moved online. We also continued to engage the community on topics such as conservation, habitat enhancement, gardening and responsible pet ownership through webinars, DIY videos and Facebook and Instagram Live sessions. Response to the e-NParks Concert Series in the Park: Rockestra® was positive, with some 600 live viewers and over 30,000 views, while the first City in Nature Concert featuring the Singapore Symphony Orchestra saw 1,400 live viewers and about 25,000 views. We also adopted a variety of tools like interactive plays, virtual tours, videos and storybooks for students, to rouse the innate curiosity children have about the plants and animals around them.

The Community Garden Festival took on a new format with online sessions, virtual tours and a marketplace, as well as gardening tutorials and demonstrations. Its series of videos achieved over 215,000 views on Facebook and YouTube while the Facebook Live sessions averaged 1,000 live viewers per session and received over 60,000 views in total.

Other digital highlights included our Pets' Day Out event that became a two-hour E-Pets' Day Out featuring shelter animals up for adoption alongside live chats with Animal & Veterinary Service vets and volunteers from Animal Welfare Groups. A one-stop portal was also available for the public to support these groups by donating or purchasing products.

In addition, to celebrate Singapore's biodiversity, the e-Festival of Biodiversity was held in September 2020. Participants attended webinars and online workshops, viewed exhibitions and downloaded activity sheets about our flora and fauna.

04 Despite the COVID-19 pandemic, events such as the first City in Nature Concert featuring the Singapore Symphony Orchestra still brought people together while staying physically apart.

05 Themed Gardening with Edibles, the Community Garden Festival took on a virtual format in 2020. Facebook Live sessions on gardening were held over two days, featuring NParks staff, Community in Bloom volunteers and allotment gardeners.

SCAN QR CODE TO VIEW THE FIRST GARDENING MASTERCLASS OF THE COMMUNITY GARDEN FESTIVAL 2020:

COMING TOGETHER WHILE STAYING APART

In the reporting year and since the start of the Circuit Breaker period, NParks has:

1. Produced more than 120 videos and tutorials
2. Conducted more than 40 webinars
3. Live-streamed seven concerts
4. Held 13 Facebook and three Instagram Live events, with several Facebook Live sessions receiving more than 1,000 live viewers
5. Garnered over 800,000 views on the NParksSG YouTube channel for our various digital efforts

01 President Halimah Yacob attending the A Better Tomorrow Festival of Lights event at Jurong Lake Gardens in December 2020. The lantern display exhibition was organised in support of the President's Challenge 2020.

02 Children can learn about nature through play at the COMO Adventure Grove in the Gallop Extension, where they can swing on a structure that resembles the aerial roots of the Weeping Fig (*Ficus benjamina*).

03 Minister of State for National Development & Communications and Information Tan Kiat How at the new dog run at East Coast Park, part of enhancements to make the area more pet-friendly for visitors.

Appreciating Nature Through Art and Play

In March 2021, more features were opened to visitors at the Singapore Botanic Gardens' Gallop Extension. They include two conserved buildings that have been refurbished into the Botanical Art Gallery and the Forest Discovery Centre @ OCBC Arboretum, COMO Adventure Grove, a café, scenic lawns, landscaped areas and naturalised habitats. The new features complement the existing OCBC Arboretum and Mingxin Foundation Rambler's Ridge that were opened in October 2019.

The Gallop Extension exemplifies the conservation and restoration of Singapore's natural and built heritage. Visitors of all ages can unwind and play amidst nature, as well as appreciate nature-inspired art and gain a better understanding of Singapore's ecosystems.

Enjoying the Gardens in the Heartlands

The majority of activities related to the annual Jurong Lake Gardens Mid-Autumn Festival celebrations went online in September 2020. Visitors enjoyed musical and dance performances as well as traditional storytelling sessions from the comfort of their homes. This digital festival reached out to more than 40,000 people. In November 2020, the Bazaar In the Garden activity also took on a hybrid format, featuring online talks and activities as well as physical guided tours of the Gardens for small groups.

In addition, views of representatives from the National Youth Council, People's Association, Taman Jurong Citizens' Consultative Committee and the skateboarding community were sought for the development of a skatepark at Lakeside Garden. When ready, this facility will provide skateboarding enthusiasts with a space in the west to enjoy their hobby amidst lush greenery.

As part of efforts to promote sustainability, NParks is collaborating with the People's Association and several Citizens' Consultative Committees in Jurong to involve residents in activities such as collecting recycled plastic to use as a sustainable material in constructing footpaths in the upcoming Chinese and Japanese Gardens.

Green Spaces for All Ages

HortPark strengthened its reputation as the Gardening Hub this past year, with the opening of two new gardens in October 2020. My Backyard Garden and Valley of Edibles showcase edibles such as Lady's Fingers and Brinjal and act as resource centres and inspiration for home gardeners on their edibles gardening journey.

In November 2020, a dog run was opened at East Coast Park. At 0.2 hectare, it is the largest such facility in eastern Singapore, and also features a bird perch next to it. These were designed in consultation with the community to further enhance pet-friendly amenities at the park.

As part of efforts to intensify nature in our parks and bring the health and well-being benefits of nature closer to residents, the family-friendly 4.5-hectare Coastal PlayGrove in East Coast Park was opened in March 2021. It boasts Singapore's tallest outdoor slide at 16 metres, the first pre-school outdoor classroom by the sea, a water playground and a Nature Playgarden. This marks the completion of the rejuvenation of East Coast Park. Visitors can now enjoy enhanced amenities and improved accessibility to even more open spaces and unobstructed vistas of the sea.

The Nature Playgarden at East Coast Park was one of three such facilities completed in the year in review. To date, there are 17 Nature Playgardens islandwide for children to experience a greater connection with nature through play, exploration and learning.

In a parallel effort for more people to experience the benefits of nature, a sixth Therapeutic Garden, located within Punggol Waterway Park, was opened in April 2020. Residents living in north east Singapore can now enjoy this green space designed to bring mental well-being benefits and respite to individuals with conditions such as dementia, stroke, heart and mood disorders, among others. NParks aims to establish 30 Therapeutic Gardens by 2030.

SCAN QR CODE TO LEARN MORE ABOUT THERAPEUTIC GARDENS:

04 Designed to engage the senses of pre-schoolers, NParks' first outdoor classroom by the sea has a chalkboard, is surrounded by edible plant species and is strategically located for a view of the sea.

05 Visitors to the Therapeutic Garden at Punggol Waterway Park can admire the elevated vista of the waterway and enjoy features that facilitate therapeutic horticulture to help improve mental well-being.

CONNECTING WITH NATURE

As joint stewards of nature, NParks works with the community to conserve and restore our natural ecosystems, strengthen island-wide ecological and recreational connectivity, and enhance animal management and veterinary care.

Connecting Residents to Nature

New nature trails and parks are being built and existing ones enhanced to provide the community with more touchpoints to immerse themselves in our flora and fauna.

A series of trail enhancement works on the central and southern segments of the Rail Corridor has been completed. The 4 km stretch between Rail Mall and Bukit Timah Railway Station was reopened in March 2021, with visitors enjoying the user-friendly paths and improved entry points. The southern section of the nature corridor was also re-opened, creating a continuous 13.3 km trail from Rail Mall to Spooner Road. Improvement works along the northern stretch between Hillview MRT and Kranji Road will commence next.

There will be an upcoming green corridor connecting East Coast Park to Changi Beach Park, with a complementary network of community corridors linking residents to other parks and gardens in the east, to allow them to better access a range of nature-based amenities.

Plans are also underway for new recreational trails. A 25 km Coast-to-Coast (C2C) Northern Trail will connect Sungei Buloh Wetland Reserve to the future Khatib Bongsu Nature Park, and a 62 km C2C Southern Trail – the longest cross-island trail to date – will connect Tuas to Changi Beach Park. These trails will enable Singaporeans to experience a greater sense of space within our small city-state.

Meanwhile, the C2C app has garnered 36,000 registered users, surpassing its original target of 30,000 registered users by 2021. The mobile app was originally developed to help users navigate the 36 km C2C trail from Jurong Lake Gardens to Coney Island Park. It has since been extended to cover 18 parks and nature areas and 11 park connectors, making use of augmented reality to provide visitors with an interactive curated walking experience.

01 The Rail Corridor (Central) represents the green heart of the Rail Corridor, being in close proximity to nature getaways like the Bukit Timah Nature Reserve, and the Dairy Farm and Bukit Batok Nature Parks.

01

02

02 Gadwalls (*Anas strepera*), last sighted in Singapore almost 32 years ago, were spotted at Sungei Buloh Wetland Reserve in December 2020, reflecting the Reserve's important role as a feeding and roosting site for birds on their migratory journeys.

03 Since 2015, NParks has been piloting a floating wetlands system at the Pekan Quarry in Pulau Ubin. Since then, herons, kingfishers, otters, as well as dragonflies have been observed to be using the wetlands.

03

ROLE OF NATURE PARKS

Singapore's four nature reserves provide refuge for our biodiversity, safeguarding our most important and key representative ecosystems. The nature parks that buffer these reserves are complementary habitats for Singapore's native flora and fauna to thrive, protecting them against the impact of urbanisation. They also enable visitors to enjoy nature-based activities such as hiking and bird watching with minimal disturbance to the nature reserves.

Expanding Our Natural Capital

A new Sungei Buloh Nature Park Network, announced in August 2020, will expand our natural capital along the northern coast, as part of our City in Nature vision. It will safeguard Sungei Buloh Wetland Reserve and complementary wetland habitats so as to strengthen the conservation of wetland biodiversity.

This decision was reached after extensive research established the ecological connectivity and complementarity between the sites, with studies showing that migratory shorebirds along the East Asian-Australasian Flyway stop and refuel at the Reserve and at the Mandai Mangrove and Mudflat. NParks also continued its tracking data analyses on migratory waterbirds which was presented and shared at the First East Asian-Australian Flyway Shorebird Science Meeting held online in November 2020. Our research and conservation efforts were further strengthened through international collaborations such as the ASEAN Flyway Network, for which Singapore is the lead.

Two new nature parks are being established to help conserve Singapore's unique biodiversity. Announced in December 2020, the Bukit Batok Hillside Nature Park and Bukit Batok Central Nature Park will add some 25 hectares to the network of green spaces in the area, enhancing ecological connectivity between Bukit Timah Nature Reserve and the forested areas within the upcoming Tengah Town.

More floating wetlands were introduced in Pulau Ubin's Pekan Quarry in September 2020, with NParks combining organic materials used in the previous floating wetlands with a more robust system that was developed by the Housing & Development Board (HDB). Covering a combined area of 4,000 m^2, or the size of about eight basketball courts, this increases the size of usable habitat for wildlife such as herons, crakes, kingfishers and otters on the island.

SCAN QR CODE TO VIEW A VIRTUAL TOUR OF SINGAPORE'S NATURE PARKS:

Stepping Up Species Recovery Efforts

SCAN QR CODE TO LEARN MORE ABOUT OUR HABITAT ENHANCEMENT AND SPECIES RECOVERY EFFORTS FOR BATS:

Recovery plans were implemented for 54 plant species and 20 animal species in the reporting year. Ten species of reef-building hard corals were added to the species recovery programme, which seeks to conserve, restore and enhance key habitats to help endangered species to recover.

In the Comprehensive Ubin Biodiversity Survey, a total of 20 new species of fauna were recorded, including one new to science and others new to Singapore or Pulau Ubin. They include four types of spiders, a butterfly, a bird new to Singapore and other species of bats, birds and dragonflies new to Pulau Ubin. Among the recent discoveries is a species of *Piranthus*, a spider newly known to science.

In another significant achievement, NParks successfully implemented GPS tags on two critically-endangered Hawksbill Turtles (*Eretmochelys imbricata*) at East Coast Park and a Green Imperial Pigeon (*Ducula aenea*) at Pasir Ris Park. This provides researchers with a better understanding of the movement and nesting habits of these species and will help us identify suitable conservation sites and devise effective management strategies to safeguard the species. In August, two batches totalling 186 Hawksbill Turtle eggs were hatched at Pulau Satumu and East Coast Park. Another 96 eggs were successfully hatched and the hatchlings released at the Sisters' Islands Marine Park as well.

In the area of plant research, there were 10 records of new species native to Singapore and the rediscovery of two native species that were previously thought to be extinct. *Nervilia singaporensis*, an endemic species of orchid and *Nitella singaporensis*, an endemic algal species, were found at Bukit Timah Nature Reserve and the Central Catchment Nature Reserve respectively. This reinforces the importance of nature reserves as core biodiversity habitats for native species.

At Woodlands Waterfront Park, habitat enhancement works were initiated after the discovery of rare forest butterflies such as the Common Birdwing (*Troides helena*). Other habitat enhancement efforts also took place at Marsiling Park and Sengkang Riverside Park with the involvement of volunteers, resulting in native species such as *Neolitsea cassia* and *Memecylon caeruleum* being planted as part of restoration work.

A permanent exhibition showcasing Singapore's rich biodiversity was opened at Dairy Farm Nature Park to introduce visitors to local flora and fauna. The exhibition includes scientific discoveries made by Alfred Russel Wallace, who explored Singapore's forests between 1854 and 1862. He was also the other 'father' behind the theory of evolution, having contributed to Charles Darwin's work on the subject.

01 In addition to a trick-eye wall, visitors to the Wallace Education Centre can explore the natural world in the Citizen Science Lab and learn about the biogeography and biodiversity of our region.

02 As part of our science-based approach to conservation, staff have started tagging visiting Hawksbill Turtles (*Eretmochelys imbricata*). Each tag's unique code will be recorded and uploaded onto an international database, enabling researchers to track the turtle's movements.

03 The orchid *Nervilia singaporensis* was recently discovered at Bukit Timah Nature Reserve. The genus was previously thought to be locally extinct as this was the first time that a *Nervilia* was recorded in Singapore since 1889.

Using Science and Data for Conservation and Engagement

Comprehensive biodiversity surveys are being carried out in the Southern Islands as well as in the Central Catchment Nature Reserve and its surrounding areas as part of a long-term plan to improve conservation efforts through the study of terrestrial and marine habitats.

The two-year Southern Islands Biodiversity survey that began in January 2020 focuses on more than 10 islands including Sisters' Islands Marine Park, Pulau Biola and Pulau Jong. The Central Catchment Nature Reserve survey is expected to span five years. It will cover nature parks such as Windsor, Thomson, Springleaf and Zhenghua, as well as the Eco-Link@BKE.

Amidst the COVID-19 pandemic, digital tools were used to continue engaging citizen scientists. More than 400 volunteers were trained virtually to help carry out biodiversity surveys of birds, butterflies and dragonflies under the Community in Nature (CIN) initiative.

To comply with stay home measures, certain sessions of the Garden Bird Watch were conducted from participants' homes. Findings from these surveys will facilitate biodiversity conservation efforts.

Participants were able to spot fauna such as the (04) Brown-throated Sunbird (*Anthreptes malacensis*), (05) Common Amberwing (*Brachythemis contaminata*) and (06) Common Mormon (*Papilio polytes romulus*) as part of our Community in Nature Biodiversity Watch series. This help from citizen scientists enables us to collect large amounts of data that contribute to conservation efforts.

Nurturing Nature Stewards of the Future

NParks is creating more avenues to foster stewardship among youths in City in Nature initiatives through the launch of Youth@SGNature. The initiative comprises a selection of existing and new programmes where youths can learn more about and contribute towards urban greenery and biodiversity conservation. These programmes include the new Youth Nature Explorer and Youth Stewards for Nature under the Biodiversity Friends Forum and Green Friends Forum. In January 2021, more than 80 youths and over 20 NParks staff mentors attended a virtual orientation session to kickstart the Youth Stewards for Nature programme.

NParks also collaborated with Outward Bound Singapore under the Youth@SGNature initiative to incorporate more activities that open conversations on deeper issues relating to the environment into the Ministry of Education-Outward Bound Singapore Challenge programme. NParks is conducting annual training for its instructors to support the initiative, which is expected to reach 14,000 students per year.

More than 40,000 students from over 350 schools participated in the Biodiversity Week for Schools programme. A new NParks Spotlight series on YouTube was presented by staff, who introduced viewers to habitats and interesting flora and fauna species. The 12 video series garnered more than 12,000 views.

To recognise schools, educators and students who have been advocates for biodiversity, the new NParks CIN Schools Award was presented to 25 students, teachers and schools in recognition of their passion for conservation.

CULTIVATING A LIFELONG LOVE FOR NATURE

This past year, work started on a set of preschool resources to help pupils appreciate the urban ecosystem and better understand human-wildlife interactions. The resource package will teach children aged 4 to 6 about civic responsibility, sharing the environment with animals, as well as how to be a responsible pet owner. Comprising a picture book, posters, educational cards, videos, a model construction kit and teaching guide for educators, the package will be sent to more than 1,900 pre-school centres in Singapore in 2021.

01 Participants of the Youth Stewards for Nature programme conducting a site survey along Punggol Nature Way to analyse the species planted and the kinds of fauna they want to attract to this area.

02 NParks has produced a resource package that includes a picture book, information cards and a model construction kit to equip pre-school educators with tools to share about the companion and community animals, as well as wildlife, that call our island home.

Rallying Community Stewardship

Community stewardship continues to drive many conservation and greening initiatives. In December 2020, NParks partnered with the Friends of Marine Park (FoMP) community to launch a series of education, outreach and research activities at Bendera Bay on St John's Island. The FoMP community, part of NParks' Friends of the Parks initiative, will spearhead efforts to balance the different uses of the area, which was previously inaccessible to the public, and schedule the programmes that will take place there.

The community is also playing a key role in shaping how some upcoming green spaces will look. In October 2020, a group of stakeholders under the Friends of the Parks Engagement initiative carried out a plant propagation session. The group prepared close to 120 cuttings which will be nurtured and subsequently planted in the upcoming Pasir Panjang Park. Similar outreach programmes have been conducted to involve members of the public in the design of Cambridge Linear Park and the Villa Verde Park extension.

NParks has some 54,000 volunteers who contribute towards activities such as Community in Bloom, conservation programmes, biodiversity surveys and conducting nature tours. For instance, volunteers from the Friends of Bukit Timah Forest community, World Wildlife Fund, United World College of South East Asia, and residents of the Sime Road neighbourhood helped remove invasive plant species from the MacRitchie forest. These efforts, which contribute to the Forest Restoration Action Plan, help strengthen the resilience of our native rainforests by restoring ecological processes, and enhancing the biodiversity and ecological connectivity in these areas. The Friends of Chestnut Nature Park community also organised guided nature walks for small groups in September 2020.

SCAN QR CODE TO VIEW THE NPARKS SPOTLIGHT SERIES ON FINDING COMMUNITY IN CONSERVATION:

03 Volunteers from the Friends of East Coast Park community working with staff to paint log 'cookies' with safe distancing messages to remind park users to stay healthy during the COVID-19 pandemic.

04 Friends of Pasir Panjang Park volunteers nurturing cuttings during a plant propagation session. These will be planted in the upcoming Pasir Panjang Park, fostering a greater sense of community stewardship.

05 Volunteers removing invasive weeds around recently planted saplings to aid their growth at the upcoming Kranji Coastal Nature Park. Partnering greenery enthusiasts enables us to better maintain and enhance habitats for native flora and fauna.

Managing Wild Animal Populations

The amended Wildlife Act took effect from June 2020. Previously known as the Wild Animals and Birds Act, the enhanced legislation features a set of new restrictions on the feeding and release of wildlife, and higher penalties to deter wildlife-related offences. It serves to protect, conserve and manage wildlife to ensure a healthy ecosystem whilst safeguarding public safety and health.

Work in the area of animal health and management continued despite the COVID-19 pandemic. When Circuit Breaker measures were introduced in April 2020, NParks conducted a study – part of the Pigeon Management Plan in partnership with town councils – to look at how reduced food from human sources affected the foraging behaviour of pigeons. Results showed that limiting human-generated food sources is an effective strategy in managing the pigeon population.

Such findings will contribute towards initiatives to remind the public not to feed wildlife. NParks is working with partners such as the Singapore Food Agency and National Environment Agency to reach out to hawker centres and coffee shops to reduce food sources for wildlife.

NParks also continues to collaborate with enforcement agencies to crack down on illegal wildlife trade and played a key role in the conviction of a man under the Endangered Species (Import and Export) Act for smuggling about 22 kg of rhinoceros horns. The horns were from the White Rhinoceros (*Ceratotherium simum*), which is protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

SCAN QR CODE TO LEARN MORE ABOUT WHY WE SHOULD NOT FEED PIGEONS:

People who feed animals such as the (01) Long-tailed Macaque (*Macaca fascicularis*) and (02) Wild Boar (*Sus scrofa*), may do so out of kindness. However, under the amended Wildlife Act, anyone caught feeding wildlife in Singapore can incur a fine of up to $10,000.

DO NOT FEED WILDLIFE

Contrary to the belief that feeding wildlife is an act of kindness, it can actually be detrimental to the animals:

1. **Wildlife population size increases as animals breed from an abundance of food. However, this growth is unsustainable because the natural habitat area supporting the animals remains the same.**
2. **It changes the animal's natural behaviour. For example, feeding Wild Boars may encourage them to venture beyond their natural habitats and into urban areas, leading to potential conflicts with humans.**
3. **The food we give to wildlife such as sweetened pastries or processed food like chips often do not meet their nutritional requirements. These foods may even make them sick.**

Strengthening Standards in Pet Sector

Working closely with stakeholders and the community, the Animal & Veterinary Service (AVS) continues to leverage technology and science to improve animal health and welfare standards.

In August 2019, AVS embarked on the Pet Sector Review. Engagement with key stakeholders such as breeders, boarders, veterinarians, academia and Animal Welfare Groups (AWGs) in the pet sector remains integral. For the pet breeding sector, revisions will be made to raise the standards of commercial breeders. These include improving veterinary healthcare and the living environment for breeding dogs, and strengthening requirements on traceability.

In the area of pet boarding, AVS intends to license boarders operating on farmlands and approved commercial premises. Revised standards now include other pets such as cats and small mammals.

Pet licensing is one measure that enables AVS to ensure animal identification and traceability. It is critical in protecting public and animal health and enables AVS to react expediently in the event of a disease outbreak. To make it easier for pet owners to license their pets, AVS introduced one-time licensing for sterilised dogs from September 2020. This means owners of sterilised dogs can apply for a licence which will remain valid throughout the animal's life.

In October 2020, AVS established the multi-stakeholder Rehoming and Adoption Work Group (RAWG) to develop community-based standards and guidelines for improving rehoming and adoption practices. AWGs, veterinarians and dog trainers were invited to contribute views and discuss how to increase post-adoption support for pet owners and enhance the standard of dog trainers. Public views on the draft standards and guidelines will also be sought.

Partnering Community for Animal Health and Welfare

To champion the well-being of stray animals and better manage their populations, AVS and AWG partners, together with veterinarians, administer sterilisation programmes for cats and dogs. Since its launch in 2011, 20,910 cats have been enrolled in the Stray Cat Sterilisation Programme (SCSP). In June 2020, Causes for Animals Singapore and Noah's Ark Cares joined the SCSP, working with existing partners, the Cat Welfare Society and the Society for the Prevention of Cruelty to Animals on the programme.

The Trap-Neuter-Release-Manage (TNRM) programme is one example of a science-based and humane approach to managing Singapore's stray dog population. Working with AWGs, together with veterinarians, AVS has enrolled more than 2,200 strays under this programme since its launch in 2018. The dogs are subsequently rehomed or released at suitable locations to live out their lives naturally.

03 The Animal & Veterinary Service is partnering the Hamster Society Singapore to spread the message that hamsters require constant care, commitment and resources to stay healthy and happy.

Under Project ADORE (ADOption and REhoming of dogs), AVS and AWGs successfully rehomed about 1,640 mixed-breed dogs in HDB flats. From 1 March 2020, the height limit for dogs which can be rehomed in flats was increased to 55 cm and the weight criteria removed entirely, meaning more dogs can now find new homes.

Related to this, AVS continues working with the community to support the rehoming of shelter animals through adoption drives and pet-related events. To mitigate the impact of the COVID-19 pandemic, AVS developed guidelines with AWG partners for activities such as Pets' Day Out to continue, in line with prevailing safe management measures.

A new AWG partner in the reporting year is Hamster Society Singapore that actively promotes responsible care for pet hamsters. AVS now has 14 active AWG partners that we work closely with to promote stewardship and safeguarding of animal welfare.

Learning Animal Behaviour and Ethology from Young

New resources have been developed to introduce information on responsible pet ownership and behaviour to students. Working with the Ministry of Education and Early Childhood Development Agency, messages on pet care, animal health and ethology as well as human-animal interaction were incorporated into resources made available to pre-schools.

There are other opportunities for children to learn about pet care and animal behaviour, such as via a series of learning journeys at animal centres.

In December 2020, pre-schoolers visited a new animal classroom at Jacob Ballas Children's Garden in the Singapore Botanic Gardens, where they observed firsthand how to care for common pets such as hamsters, rabbits and cats. Lessons learnt during these journeys are reinforced by related storybooks and videos. More resources such as posters and 3D model construction kits are currently being developed.

01

02

03

01 On average, around 250 local mixed-breed dogs are rehomed under Project ADORE each year. With the revision in size limits, about 50 more mixed-breed dogs can be rehomed to HDB flats per year.

Children can learn about responsible pet ownership through educational resources like (02) jigsaw puzzles and (03) by visiting a new animal classroom at the Jacob Ballas Children's Garden in the Singapore Botanic Gardens during a Learning Journey.

Sharpening Competencies with Science-Based Approach

Together with the Singapore Veterinary Association, AVS developed the Singapore Vaccination Guidelines for Dogs and Cats to raise awareness of the importance of vaccination in safeguarding animal health and combating antimicrobial resistance (AMR). The guidelines include updated and science-based recommendations suited to our local context, advising veterinarians and pet owners on protecting animals against vaccine-preventable diseases.

In October 2020, the Centre for Urban Greenery and Ecology (CUGE), working with AVS, launched the Science Behind Animal Behaviour webinar series to deepen engagement with pet owners and raise the standards of service providers in the pet sector. Other webinars featured international experts in the industry, such as Dr Roger Abrantes from the Ethology Institute in Portugal and Dr Jenna Kiddie from Dogs Trust UK.

SCAN QR CODE TO VIEW THE WEBINAR ON PRINCIPLES OF ANIMAL BEHAVIOUR MODIFICATION BY DR ROGER ABRANTES:

WHAT IS AMR?

Antimicrobial resistance (AMR) is a growing global health threat. As microbes become increasingly resistant to antimicrobial agents such as antibiotics, our ability to treat infections becomes compromised. Animals with antimicrobial-resistant bacteria can suffer from infections that are more serious, and such bacteria may even be transmitted between animals and humans.

03

04

Intensifying Biosurveillance for Human and Animal Health

AVS adopts stringent multi-pronged and multi-stakeholder approaches to safeguard human and animal health, as well as animal welfare. New biosurveillance programmes have been developed to detect, contain, and manage diseases early.

When there was an outbreak of African Horse Sickness (AHS) in a regional country in September 2020, AVS imposed import restrictions on live horses and horse-related materials from the affected country and stepped up inspections of all local equine establishments. AVS engaged equine establishments to institute daily health screening of horses, strengthen biosecurity and vector control measures and developed contingency plans. AVS also worked closely with equine veterinarians to source for effective vaccines to be registered for emergency use and collected samples from local horses for further analysis and investigation.

AVS is working with the National Environment Agency on the surveillance of disease-carrying vectors and developing in-house capability to use advanced laboratory methods to meet these challenges. Through such collaborations, we have been able to quickly pick up cases of Leishmania and Rabbit Haemorrhagic Disease, and advise pet owners and veterinarians on the strict biosecurity protocols to minimise disease transmission.

03 Veterinarians can refer to the Singapore Vaccination Guidelines for Dogs and Cats when administering vaccines essential for animal health.

04 Strong partnerships with agencies and veterinarians enable AVS to detect illnesses like the Rabbit Haemorrhagic Disease early. While this can be fatal to rabbits, it does not affect humans.

NURTURED BY NATURE

NParks is focused on building up capabilities and broadening skillsets with science-based knowledge across areas such as nature conservation, arboriculture, horticulture, and animal management.

01

Building up Science and Technology

NParks has been designated as the lead agency for the Urban Nature Satellite of Excellence initiative under the Ministry of National Development's Science and Technology Plan, and is also the implementing agency for the Marine Climate Change Science programme, a new S$25 million research funding initiative supported under the national Research, Innovation and Enterprise Plan 2021 – 2025.

This programme will serve as a national focal point for multi-disciplinary marine climate change research, and will involve government agencies, Institutes of Higher Learning and industry partners. It aims to develop scientific evidence-based interventions to address the impact of climate change on Singapore's marine environment and ecosystems.

In the reporting year, NParks embarked on more than 100 research projects under its Science and Technology Masterplan. In January 2021, NParks launched a digitalisation pilot at Bishan-Ang Mo Kio district aimed to showcase new digital tools and technologies in parks, biodiversity and tree management. The pilot features the Tree Structural Model and a network of sensors to drive operational effectiveness and sharpen predictive capabilities using machine learning and AI technology. A beta version of the Remote Tree Measurement System was also implemented to improve the efficiency of tree inspections.

In place of physical measurements, this system uses machine learning to automatically map out the geolocations of individual trees and extract physical measurements of trees by processing Light Detection and Ranging (LiDAR) point cloud scans. This reduces the need for tree inspectors to engage in time-consuming, physical fieldwork to manually update our tree inventory.

Science and technology are also being applied in marine conservation. As part of ongoing research under the Marine Conservation Action Plan, NParks has partnered the National University of Singapore to monitor marine species of interest and better understand their ecology. This includes the use of hydrophone units for dolphins, underwater camera traps for the Neptune's Cup sponge (*Cliona patera*), and environmental DNA techniques developed in collaboration with the university.

NParks is also working with GovTech to develop vessel detection algorithms utilising CCTV cameras deployed at the Sisters' Islands Marine Park to automatically detect and alert staff to unauthorised vessels within the Marine Park.

At Jurong Lake Gardens, a two-year autonomous vehicle pilot was launched in December 2020 to move visitors around the 53-hectare Lakeside Garden and to seek their feedback to improve the system.

01 The Marine Climate Change Science programme led by NParks aims to better understand the impact of climate change on marine species, habitats and ecosystems, and address problems such as rising sea levels and increasing sea surface temperatures.

Boosting Industry Competencies

The landscape sector has been vital in our greening journey as we transform Singapore into a City in Nature. Since the launch of the Landscape Sector Transformation Plan in 2019, NParks has been working closely with partners and Institutes of Higher Learning in revamping the industry.

NParks will be training the sector and budding landscape professionals in the use of advanced tools and technologies. We first piloted digital technologies such as the Remote Tree Measurement System and tree tilt sensors in January 2021, and the aim is to transfer skills and technology to the sector when the pilot is completed. NParks also organised webinars and engagement sessions with key partners to encourage companies to grow through digitalisation, mechanisation and professionalisation.

To upskill capabilities and nurture the talent pipeline for the industry, students from the Institute of Technical Education and other Institutes of Higher Learning now learn emerging skills such as biophilic design, biodiversity management and sustainable landscaping. They gain knowledge and hands-on experience through programmes such as Student-Run Parks, learning journeys, immersions, talks and workshops. There are also internship and on-the-job training opportunities to better prepare students for a career in managing our City in Nature.

NParks also works closely with the Tripartite Cluster for Landscape Industry on Progressive Wage Model (PWM) matters, the recent expansion of Singapore Workforce Skills Qualifications courses and the proposed introduction of a Specialist Track under the PWM Career Ladder.

During the Circuit Breaker period, skills upgrading continued through e-learning courses and free training materials developed by the Centre for Urban Greenery and Ecology (CUGE). NParks also engaged the Landscape Industry Association of Singapore to develop stringent COVID-19 safe management guidelines for workers to perform their jobs safely and efficiently. We are also working with industry partners to enhance the remote monitoring of sites and safe-distancing practices using the Contractor Fleet Management System.

BE EMPLOYED TO GARDEN

Love gardening in your community? Earn an income while doing it! The Resident Gardeners programme enables gardening enthusiasts to be employed by NParks contractors to maintain their neighbourhood green spaces. Successful applicants will be trained on the job via Workforce Skills Qualifications courses. This programme is piloted at Ang Mo Kio, Punggol and Yishun, and will be progressively rolled out to other areas.

02

03

SCAN QR CODE TO VIEW THE WEBINAR ON A DAY IN THE LIFE OF AN ARBORIST:

NParks is working with stakeholders in the landscape industry and Institutes of Higher Learning to digitalise, mechanise and professionalise the landscape sector. Tools such as the (02) resistograph that detects internal defects in trees and (03) sensor technologies that detect grass height can help to improve the skill sets of workers and reduce manpower needs.

Building Expertise in Wildlife Forensics

The Centre for Wildlife Forensics was launched in August 2020, strengthening our detection and diagnostic capabilities by drawing upon expertise across NParks to identify and analyse specimens involved in the illegal wildlife trade. This centre also enhances Singapore's capability to conduct wildlife forensic investigations and reinforces our commitment to conservation.

To build up competency and deepen expertise and skillsets of the animal management sector, CUGE rolled out professional certification programmes in 2020, namely Animal Health, Animal Welfare and Behaviour, and Animal Management.

Incorporating Technology to Manage COVID

At Jurong Lake Gardens East and Central, the Hubble system, which integrates data on approved workers from the Building and Construction Authority, Ministry of Manpower and Ministry of Health, was used to ensure only healthy and authorised personnel were allowed on the work sites. Workers were monitored using AI cameras and safe distancing devices, which sounded an alert when safe distancing among workers was not observed.

The Safe Distance @ Parks portal was rapidly developed for the public to check park visitorship levels and trends to avoid crowded parks. Drones were deployed at selected parks and nature areas to support the monitoring of adherence to safe distancing measures. Collectively, these measures help to keep our parks open for visitors to enjoy, while lowering the risk of COVID-19 transmission.

SCIENCE THAT PROTECTS WILDLIFE

The Centre for Wildlife Forensics uses DNA analysis methods like next-generation sequencing, and chemical methods such as isotope analysis to gain useful insights on seized items such as the origin of the population of species that have been poached. This shows how science can support our global fight against illegal wildlife trade.

SCAN QR CODE TO LEARN MORE ABOUT THE CENTRE FOR WILDLIFE FORENSICS:

01 Minister for National Development and Minister-in-Charge of Social Services Integration Desmond Lee (left) examining elephant ivory samples at the Centre for Wildlife Forensics. The Centre will enhance NParks' in-house capabilities and support Singapore's implementation and enforcement of our CITES commitments.

02 Pangolins are one of the most trafficked mammals in the world. While it is difficult to identify a pangolin's species based on individual scales, DNA forensics and techniques are crucial in providing information such as country of origin to facilitate trade regulation and enforcement.

As the country adjusted to living in a COVID-19 pandemic world, staff also adapted to new roles and responsibilities such as (03) using technologies such as drones to monitor visitor levels in our parks and nature reserves and (04) performing Safe Distancing Measures duties to ensure that all visitors can still enjoy our green spaces safely.

Promoting Learning amongst Staff

The exchange of knowledge by Hort Champs amongst staff continues to contribute significantly to learning within the organisation. Hort Champs are staff who take part in workshops and field trips and then share the knowledge with other staff or visitors to our green spaces. In 2020, they conducted online workshops on topics such as managing pests and diseases, plant identification, introduction to wildflowers in Singapore and the use of fragrant plants in a landscape. This helps staff keep their skills relevant and updated while working from home in split teams due to COVID-19 mitigation measures.

The 39th Hort Colloquium also served as a valuable platform for the sharing and exchanging of information. Held on 15 September 2020, the online event saw over 130 participants attend talks to learn about new initiatives in urban greening and developments. They also gained insights into the conservation efforts that go into the development and planning of parks like Jurong Lake Gardens.

At the annual NParks Staff Conference in November 2020, over 1,000 staff tuned in online to celebrate efforts in dealing with the challenges presented by the COVID-19 pandemic as well as our core work in advancing Singapore's vision of becoming a City in Nature.

Some 50 staff, with strict adherence to safe distancing measures, attended the first physical workshop conducted since the onset of COVID-19 measures. Held onsite at HortPark in January 2021, speakers and participants discussed the importance of biosurveillance, a timely reminder of its role in mitigating risks resulting from the increase in animal-human contact and nature interactions.

In 2020, five undergraduate scholarships, one overseas merit award and two postgraduate scholarships were awarded by NParks to staff and external candidates.

SAFE DISTANCING MEASURES DUTIES

During the Circuit Breaker, staff continued to perform essential landscape-related operations such as preventive tree pruning and grass cutting, as well as responding to urgent animal management and welfare issues.

Some 1,000 staff were involved in Stay Home Notice Hotel Operation and Safe Distancing Measures (SDM) duties across gardens, parks, park connectors and nature reserves. Staff were also rostered for enforcement of SDM in pet shops, animal shelters and veterinary clinics.

GARDEN CITY FUND

Message from the Chairman

2020 brought about a change in how we work, play, live and learn. It was also a year that the community in Singapore reconnected with nature and discovered the rich local heritage in our backyard. This has presented new opportunities for both individuals and corporates to be involved.

We would like to thank our partners for contributing generously to the preservation of our natural heritage. This enabled us to further our efforts in advancing Singapore's City in Nature vision and encouraging greater ownership of our local flora and fauna.

The Gardening with Edibles initiative launched during the 2020 Circuit Breaker sparked widespread love for gardening and could not have taken root without co-funding from Tote Board and DBS Bank.

The Gallop Extension at the Singapore Botanic Gardens, which saw the opening of the COMO Adventure Grove, Forest Discovery Centre @ OCBC Arboretum and Botanical Art Gallery, was supported by generous donations from our partners. The new features help bring people closer to nature by inviting children to connect with nature through play, and all visitors to learn more about forest conservation, and developing a deeper appreciation of nature through art.

The Plant-A-Tree programme, a strong channel for community participation in the greening of Singapore and climate-change mitigation, has gained even greater momentum with the launch of the OneMillionTrees movement. To this end, I would like to acknowledge new and long-time partners that have supported tree planting. It is also heartening to note the key role Keppel Corporation played in being one of the first major donors to back the initiative, with their pledge of S$3 million to plant 10,000 trees over the next five years. We hope that other companies and individuals will be similarly encouraged to play active roles in restoring and conserving our natural heritage.

GCF's scope has also been expanded to enable greater inclusivity of animals under our vision of a City in Nature. In line with this, the Wildlife and Animal Management and Outreach Fund has been set up to support responsible pet ownership and our fight against illegal wildlife trade.

Overall, the effort to sustain our City in Nature is only possible with the strong commitment and continued support from like-minded partners. Together, we seek to develop our natural heritage in a sustainable and inclusive manner for the benefit of our future generations.

Professor Leo Tan
Garden City Fund Chairman

GARDEN CITY FUND

Charity Registration Number/
Unique Entity Number:
T02CC1634C

Charity Registration Date:
19 November 2002

IPC Number:
IPC000104

Auditor:
Ernst & Young LLP

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

It seeks to enhance the enjoyment of our City in Nature 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 and enhance nature and ecology, art and culture, landscape and horticulture, animal and greenery management, animal health and welfare, conservation; and citizen involvement to encourage greater ownership of our City in Nature.

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 GCF Management Committee comprises mainly non-executive members except for the GCF Secretary Dr Leong Chee Chiew, who is also the Executive Director, National Parks, Gardens & Nature Reserves and Commissioner of Parks & Recreation.

Between 1 April 2020 and 31 March 2021, the total amount of cash donation income through the GCF was about S$6.0 million.

Central Catchment Nature Reserve

The members of the 9th GCF Management Committee were appointed from 1 November 2018 to 31 October 2020 and the 10th GCF Management Committee were appointed from 1 November 2020 to 31 October 2022.

The 9th and 10th GCF Management Committee for the Year in Review

APPOINTMENT	NAME	ATTENDANCE AT MANAGEMENT COMMITTEE MEETING
Chairman	Professor Leo Tan*	4/4
Treasurer	Mr Goh Kong Aik	4/4
Secretary	Dr Leong Chee Chiew*	4/4
Members	Mr Tan Khin Nguan*	3/3
	Mrs Kirtida Mekani*	4/4
	Mr Daren Shiau	4/4
	Mr Cheng Hsing Yao	2/3
	Mr Gerald Tan^	1/1
	Mr Han Jok Kwang^	1/1

* These members have continued to serve for more than 10 consecutive years. Their wealth of knowledge, services and expertise have guided the charity to reach out to corporates and individuals for funding support, and ensured sound governance of the charity. As professionals in their own right, they have also contributed to a balanced composition in the committee, with a diverse mix of backgrounds and experience to meet the growing needs of the charity.

^ Incoming members for the 10th Garden City Fund Management Committee.

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 the GCF, and will not be able to participate or cast a vote in the transaction/project.

Gardening with Edibles

Launched during the Circuit Breaker, Gardening with Edibles aimed to enable households to garden together and to bring nature into homes. This complemented Singapore Food Agency's promotion of food resilience and its 30 by 30 goal to meet 30 percent of the country's nutritional needs locally by 2030.

Under the initiative which was jointly funded by DBS and Tote Board, free packets of leafy and fruited vegetable seeds were distributed to interested members of the public together with online gardening resources to help them grow their own edibles at home. It aimed to strengthen a love for gardening and involve the public in various gardening platforms including the Community in Bloom programme.

Forest Discovery Centre @ OCBC Arboretum

New features were launched at the Gallop Extension of the Singapore Botanic Gardens to educate the public on the value of our forests. This included the opening of the Forest Discovery Centre @ OCBC Arboretum, which showcases the forest ecosystems in Singapore and highlights the importance of conserving them through a series of interpretive and interactive displays. The Forest Discovery Centre @ OCBC Arboretum is part of a S$4 million donation by OCBC Bank to transform Gallop House No. 5 (Atbara) into a knowledge centre for conservation, and will also host the Singapore Botanic Gardens' Tropical Forest Ecology Research programme.

GARDEN CITY FUND

COMO Adventure Grove

In March 2021, COMO Adventure Grove, located within the Singapore Botanic Gardens Gallop Extension, was opened to members of the public. The nature playgarden is inspired by the distinctive parts of trees found within the Gardens and is a modern interpretation of the timeless experience of climbing and playing in trees, allowing children to connect with nature through play and exploration.

Wildlife and Animal Management and Outreach Fund

A Wildlife and Animal Management and Outreach Fund was set up with the support of private donors including S$200,000 from the estate of the late Essery Gerald Stephen through Dr Tan Hwa Luck and S$20,000 from Mr Lim Chee Kiat. With animal wellness at its core, the programme aims to upscale the competencies and professionalism of veterinary and animal-related industries, and raise community awareness on responsible pet ownership along with the importance of adoption.

Trees of the World 2020

More than S$100,000 was raised through the Trees of the World 2020 initiative. In addition to the monetary contribution, the project also brought together individuals, corporations, embassies, schools, hospitals and non-profit organisations that decorated tropical trees at the Singapore Botanic Gardens to create a special display that shared season's greetings, as well as a message of hope and inspiration with visitors. All funds raised from the event went to the Give to the Gardens programme, which supports the Gardens' work as a leading botanical institution in Singapore.

Native Bees Conservation

Some S$63,000 was raised to help our native bees in a project, which involves up to 12 schools to improve conservation, research and outreach of solitary bees. The funds will go towards setting up resources to educate the public on the importance of bees, including their role as efficient plant pollinators that help with the natural regrowth of native plants.

01

02

03

Community Nurseries

The first community nursery was opened at Dairy Farm Nature Park with the support of HSBC, that donated S$160,000 for two such nurseries through GCF. At least 10 of these nurseries are expected to be established islandwide over the next three years. This will enable more partners to be involved in such projects and give members of the community an opportunity to be involved in the propagation and nurturing of saplings.

Biodiversity Week for Schools

Another HSBC-backed initiative was Biodiversity Week for Schools, organised under the NParks Community in Nature initiative to commemorate International Day for Biological Diversity on 22 May. It comprises a series of activities for students to learn more about Singapore's rich flora and fauna.

Plant-A-Tree Programme

Corporate and community involvement in the OneMillionTrees movement continued to grow, with more companies coming on board the Plant-A-Tree (PAT) Programme.

Joining long-time supporters such as UPS Foundation Inc., Shimizu Corporation and Dymon Asia Capital, were new corporate partners including Broad Peak Investment Advisers, Southern Ridges Capital, Farrer Park Hospital, Applied Materials SEA, MetLife, EZ-Link and the Singapore Police Force, which celebrated 200 years of policing.

The PAT programme provides a platform for organisations and individuals to participate in the greening of Singapore by planting trees. Since the programme's inception in 2007, over 40,700 trees have been pledged by more than 700 corporations and some 3,400 individuals.

Looking Forward

Looking forward, the Garden City Fund pledges to continually engage its various stakeholders in the community, to support NParks' conservation and research endeavours, as well as its outreach and educational programmes.

Its mission remains to nurture a love for nature, advocate a sense of ownership, and exhort the community to play an active part in preserving Singapore's legacy as a City in Nature.

Visit **www.gardencityfund.gov.sg** for more information.

01 Gallop House No. 5 (Atbara) was built in 1898. It now houses the Forest Discovery Centre @ OCBC Arboretum that showcases our forest ecosystems and highlights the importance of conserving them.

02 The Gardening with Edibles programme is part of a larger effort to build stronger social resilience and well-being among the population, and will help boost interest in both the young and old in community gardening.

03 The Plant-A-Tree Programme continues to be a valuable touchpoint for organisations and individuals to plant trees and actively participate in the greening of our City in Nature.

GARDEN CITY FUND DONORS' ACKNOWLEDGEMENT FY 2020

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

S$1 million and above

- Peter Lim Eng Hock

S$100,000 and above

- COMO Foundation
- DBS Bank
- Exxonmobil Asia Pacific Pte Ltd
- Goh Foundation Ltd
- Han Jok Kwang and Leong Wai Leng
- Hermès Singapore
- Hotel Properties Limited
- Keppel Care Foundation
- Mingxin Foundation (SymAsia Singapore Fund)
- Oversea-Chinese Banking Corporation Limited
- Tan Jiew Hoe
- Temasek Foundation

S$10,000 and above

- Afton Chemical Asia Pte Ltd
- Air Liquide Singapore Pte Ltd
- AlfaTech Vestasia Pte Ltd
- Amgen Singapore Manufacturing Pte Ltd
- Applied Materials SEA Pte Ltd
- Chan Wing Cheng
- Chartered Asset Management Pte Ltd
- Dymon Asia Capital (Singapore) Pte Ltd
- Equinix Singapore Pte Ltd
- EZ-Link Pte Ltd
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- K K Sustainable Design Pte Ltd
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- Lauer & Sons Investments Pte Ltd
- Lee Yung-Shih Colin
- Leong Sou Fong Rosslyn
- Lim Chee Kiat
- Loh Renyao
- MetLife
- Nomanbhoy & Sons Pte Ltd
- Ong Jen Yaw
- POLWEL Co-Operative Society Limited
- Senior Police Officers' Mess
- Seraya Energy Pte Ltd
- Societe des Matieres Premieres Tropicales Pte Ltd (SMPT)
- Tan Hwa Luck
- The Hongkong & Shanghai Banking Corporation Limited
- The Singapore Police Co-Operative Society
- Thekchen Choling (Singapore)
- UPS Foundation Inc
- Urban Redevelopment Authority

Below S$10,000

- "K" Line Pte Ltd
- Abbott Manufacturing Singapore Private Limited
- AbbVie Operations Singapore Pte Ltd
- Alcon - CIBA VISION Asian Manufacturing & Logistics Pte Ltd
- Alcon Singapore Manufacturing (ASM) Pte Ltd
- Alexandra Strandborg
- Alka Kapoor
- American Chamber of Commerce in Singapore
- Ang Tian Chua
- Angela Chih Wen Huang
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- Aventis Pharma Manufacturing Pte Ltd
- Avinash Kohli
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- Baxalta Manufacturing SARL Singapore Branch
- BK Cardiology Pte Ltd
- Carl Ward
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- Chee Junmin Lester
- Chua Beng Tong
- Chua Siok Tian
- Citrix Systems Singapore Pte Ltd
- Desmond Lee Ti-Seng
- Donna Susan Robertson
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- Elisabeth Rothschild
- Enny Wijaya
- Foo Siang Keng
- Fotios Kampouris
- Francis Bechet
- Gay Chee Cheong
- GenRiver Financial Pte Ltd
- Glaxo Wellcome Manufacturing Pte Ltd
- GlaxoSmithKline Biologicals
- Goh Eng Koon
- Goh Kok Kee Alfred
- Gozu Yutaka
- Gwendaline Lee
- Heather Leigh-Ann Emslie
- Hidehiko Kojima
- Huang Dertuen
- i-Lab Engineering Pte Ltd
- Iron Mountain Data Center Pte Ltd
- Jessica Lau Xiao Lin
- Kamal Karmakar
- Kaneka Singapore Co. (Pte) Ltd
- Kimpton Nicholas John
- KOSÉ Singapore Pte Ltd
- KrisShop Pte Ltd
- Land Transport Authority
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- Lee Qin Yi
- Lim Chong Hee
- Lim Kee Kea
- Lim Kim Hang
- Lim Siang Hoe Benny
- Lonza Biologics Tuas Pte Ltd
- Low Elaine
- Mapei Far East Pte Ltd
- Marcellinus Maria Smit
- Mark Alexander McGeoch
- Matthew Teng Wen Lien
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- Ng Chuey Peng
- Ng Wei Yong
- Ngien Hoon Ping
- Nichola Rastrick
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- NPS International School Pte Ltd
- OBGYN Consultants Pte Ltd
- Peggy Santosa
- Peng Chung Mien
- Pfizer Asia Manufacturing Pte Ltd
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- Portcullis Fund Administration (S) Pte Ltd
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- Rin Nan Lun
- Roche Singapore Technical Operations Pte Ltd
- Rotary Club of Jurong Town, Singapore
- Schmidt Ralf
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- Singapore LNG Corporation Pte Ltd
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- Tan Wee Hin Leo
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- Terumo Asia Holdings Pte Ltd
- Terumo BCT Asia Pte Ltd
- Terumo Singapore Pte Ltd
- TP Utilities Pte Ltd
- Tridex Pte Ltd
- TTJ Design & Engineering Pte Ltd
- VF Brands Pte Ltd
- Wang Meiting
- Whang Hwee Yong
- World Orchid Conference
- Yap Lian Eng Ivy
- Yee Ming Innes Bridges

Donations listed above are of a minimum amount of $1,000.

We thank all other individuals and organisations who have given to the charity, including in-kind donations.

SUSTAINABILITY REPORT

Our Sustainability Story

Greenery is very much a part of Singapore's DNA and has been integral to our socioeconomic as well as infrastructure development journey since independence. Our parks, gardens, nature reserves and verdant streetscapes are valuable assets that provide nature-based solutions for ecological and climate change resilience.

NParks is committed to conserving nature and biodiversity, nurturing greater community stewardship, and building capabilities within the organisation and industry to uphold Singapore's reputation and standing as a City in Nature.

In February 2021, the Government unveiled the Singapore Green Plan 2030, a whole-of-nation movement to advance the national agenda on sustainable development. City in Nature, as one of the five key pillars of the Green Plan, will create a green, liveable and sustainable home for Singaporeans.

2020 Achievements	Key Sustainability Targets by 2030
Park Provision Ratio of 0.78 ha/1,000 population	Park Provision Ratio of 0.8 ha/1,000 population
132 ha of skyrise greenery	200 ha
360 km of park connectors open to recreational activity	500 km
150 km of Nature Ways	180 km
93% households within a 10 min walk to a park	100%
1,600 Community in Bloom Gardens	3,000
107,000 trees planted	1 million more trees

Our Sustainability Strategies are:

Sustaining our City in Nature

Creating the best possible living environment through excellence in nature conservation, greenery and recreation.

Nurturing Communities

Strengthening Singapore's greenery and biodiversity in partnership with the community.

Creating a Great Workplace

Developing our staff and taking care of their well-being.

01 The Yellow Featherlegs damselfly (*Copera marginipes*) is one of 13 species newly recorded for Pulau Ubin. It was encountered during the first comprehensive biodiversity survey conducted on the island in 2020.

02 Planting more trees on Jurong Island, like these that now line Seraya Place, will help cool temperatures, benefit the ecosystem and enhance the attractiveness of working there.

Sustaining Our City in Nature

Extending Singapore's Natural Capital

NParks is responsible for maintaining and enhancing Singapore's greenery for future generations. Our nature reserves safeguard primary and secondary rainforests and are core habitats for native biodiversity. They are also primary providers of ecosystem services like clean air and water.

Nature parks have been established on the margins of the nature reserves, serving as complementary habitats and buffers. These buffers provide expanded habitats for Singapore's native flora and fauna beyond the nature reserves, and also provide spaces for nature-based recreation. In August 2020, we launched the new Sungei Buloh Nature Park Network. This new network will conserve Singapore's only gazetted wetland reserve and safeguard a variety of complementary wetland habitats such as the Mandai Mangrove and Mudflat, strengthening the conservation of wetland biodiversity around Sungei Buloh Wetland Reserve. These efforts to extend our natural capital will continue to preserve and enhance natural carbon sinks across the island.

Intensifying Nature in Gardens and Parks

More than 40 percent of Singapore is covered in greenery, in the form of nature reserves, parks, gardens, roadside greenery, skyrise greenery and vacant lands. In FY2020, NParks planted about 107,000 trees. To curate the landscapes in our parks and gardens to make them more natural, we will incorporate natural designs and planting in new and redeveloped parks and gardens, recreating the look and feel of Singapore's natural forests.

The waterbodies within our gardens and parks will also be naturalised like how we have done so in Bishan-Ang Mo Kio Park and Jurong Lake Gardens. This will contribute to Singapore's resilience in addressing the challenge of sea-level rise and inland flooding due to climate change.

Beyond these, NParks will establish more therapeutic landscapes in gardens and parks, which can be programmed for seniors and children as well as cater to diverse conditions such as dementia and mood disorders. In addition, more Nature Playgardens with biophilic elements and natural materials will be introduced, for the young to engage in child-directed spontaneous play. Finally, NParks will implement species recovery plans for 90 plant species and 40 animal species by 2030.

Restoring Nature into the Urban Landscape

NParks will intensify the greening of our streetscapes through the implementation of multi-tiered planting, which will create a forest-like structure along our roads. Roads with such planting are known as Nature Ways, which augment our network of ecological corridors between key habitats.

SUSTAINABILITY REPORT

Nurturing Communities

We will increase the implementation of skyrise greenery in buildings and infrastructure and focus on greening Singapore's industrial estates, which are currently among the hotter areas on the island. NParks is working with various stakeholders to increase the total number of trees across industrial estates to almost three times as many, from nearly 90,000 trees to about 260,000 trees by 2030. These efforts will help mitigate the urban heat island effect, resulting in cooler temperatures, while helping to improve air quality and beautify the surroundings.

Strengthening Connectivity Between Green Spaces

To sustain a healthy natural ecosystem, NParks will strengthen the ecological connectivity between our green spaces through nature corridors, the Park Connector Network and Nature Ways. There are currently 360 kilometres of park connectors, and we are expanding our Park Connector Network so that we will have 500 km of Park Connectors by 2030. This effectively means that every household will be within a 10-minute walk from a park by 2030, making our gardens and parks even more accessible.

Strengthening Community Stewardship

Our gardens and parks are important shared spaces for different communities. These common green spaces provide access to people from all walks of life to come together and enjoy their time amidst nature.

In response to the imposition of various COVID-19 related measures, NParks pivoted to engagement on digital platforms to overcome the restrictions on physical events and to reach out to a wider audience. Examples include holding large-scale events like concerts virtually and curating hybrid festivals and programmes.

As a City in Nature, we will enable the community to forge closer bonds through active stewardship of the environment. NParks will be expanding its outreach programmes to communities, schools, and individuals to encourage them to become stewards of greenery and biodiversity. Communities can participate in the design, building, management and programming of more than 50 parks in their estates between 2020 and 2025. This is an extension of NParks' Friends of the Parks initiative*, which aims to promote greater community stewardship in the management of our green spaces.

NParks has launched a new movement to plant a million more trees across Singapore by 2030. Led by the community, the OneMillionTrees movement will take place throughout the island, including in streetscapes, gardens, parks and park connectors, nature reserves and nature parks, industrial areas and schools. The community is key to the success of this movement.

In the reporting year, more than 6,400 participants have joined us in tree-planting activities. This includes the Friends of the Parks communities, participants of the Community in Nature (CIN) initiative such as schools and residents, Community in Bloom (CIB) gardening groups, NParks volunteers, nature groups, and corporate partners.

The nationwide CIB gardening movement aims to bring residents together to foster community spirit and active stewardship of our City in Nature. Today, there are more than 1,600 community gardens across Singapore, set up and managed by our community gardeners. NParks will continue to work towards the target of building 3,000 CIB gardens by 2030.

In September 2020, NParks launched the Youth@SGNature initiative, which brings together NParks' existing and new programmes to provide youths (15 to 25 years old) with more platforms to engage with nature and cultivate them to be stewards for biodiversity conservation and greenery.

* There are now ten Friends of the Parks communities; each comprises local stakeholders, volunteers and enthusiasts coming together to develop ground-led initiatives to promote stewardship and responsible use of our parks and nature reserves.

Getting Involved

We have 54,000 volunteers who play an integral role in helping to achieve our vision of making Singapore a City in Nature. Our network of volunteers includes community gardeners from the CIB programme, citizen scientists from the CIN initiative, and members of Friends of the Parks, amongst others. Aged from nine to over 80, they range from students, homemakers and working professionals, to retirees. Many of them volunteer because they appreciate the opportunity to learn about and contribute towards our conservation efforts. Volunteers often become advocates of our messages and our ambassadors to the community, and share with others important biophilic issues, as well as insights and perspectives of living in a city rich in nature and biodiversity.

We will expand NParks' outreach programmes to grow our volunteer base from the existing 54,000 to 70,000 by 2030. NParks will build up its CIN initiative by involving more schools and partners in reforestation efforts and citizen science projects, and expand the CIB programme through the provision of more allotment gardens and encouraging the planting of edibles.

01

02

01 Participants from the Singapore Scout Association planting trees. Such activities help engage and empower youths to become active stewards for greenery and biodiversity.

02 Senior Minister of State for National Development & Communications and Information Sim Ann (extreme left) visiting the Old Upper Thomson Park Connector to understand the conservation efforts in the area. Looking on is NParks CEO Kenneth Er.

SUSTAINABILITY REPORT

Creating a Great Workplace

Learning and Development

Staff are encouraged to grow their professionalism, build capabilities and provide service excellence. NParks develops staff through a competency development framework focusing on business, operational and people excellence.

CUGE and professional certification bodies conduct in-depth training for operational staff, including formulating a specialised roadmap to develop professional arborist competency.

Corporate staff can get certified by industry-recognised agencies such as the Institute of Singapore Chartered Accountants and Institute for Human Resource Professionals.

Staff with Professional Operational Certifications:
(as of 2020)

114 Certified Park Managers

112 Certified Practising Horticulturists

235 ISA Certified Arborists

36 Certified Playground Safety Inspectors

10 Project Management Professionals

Expanded Vocational and Skills Allowance Framework

To encourage officers to deepen their professional expertise in NParks' core job areas and facilitate greater deployability of staff, officers who possess certifications recognised under NParks' Vocational and Skills Allowance Framework are eligible for a monthly allowance.

Additionally, the list of certifications that qualify officers for the allowance has also been expanded to encourage officers to deepen their professional development. This includes certifications in Green Mark Professional, Tree Risk Assessment Qualification, Therapeutic Horticulture and Animal Welfare & Behaviour and Animal Health.

Competency-Based Remuneration

We will continue to professionalise the role of an NParks officer and improve the attractiveness of a career in NParks. Progression and remuneration will recognise officers' skills and competencies and support and encourage continuous movement of officers (horizontal as well as vertical) throughout their career. Officers will be encouraged to pick up additional competencies relevant to NParks' work, which will be supported by the enhanced vocational and skills allowance framework.

Staff Well-Being

The Staff Well-Being Committee (SWBC) works with the Human Resource branch and Staff Union to organise activities that engage our workforce.

In FY2020, SWBC organised a specially curated range of events with a key focus to engage and bring together all staff in the NParks family.

Together with the three sub-committees – Social and Recreation, Healthy Lifestyle, and Kindness, over 45 events were organised. More than 65 staff from various divisions served across three sub-committees, volunteering their time and effort to curate a calendar of events and activities for staff. The committees delivered these programmes and activities in 2020 primarily on e-platforms, which helped to engage staff while they worked from home. For instance, the Social and Recreation Committee kicked off a fun and thematic staff bonding photo competition over Skype to help build camaraderie while being physically apart.

Since September 2020, SWBC also stepped up activities to include more talks and information materials promoting mental and physical well-being among staff. Talks such as Enhancing Mental Health at times of Adversity and Keep Well and Sleep Well in addition to e-fitness classes were organised.

Under the Kindness Movement Committee, activities like Blood Donation Drives, promotion of various Yellow Ribbon projects, sprucing up gardens at the Handicaps Welfare Association and the National Library Board Reading Movement were organised to allow staff to volunteer for projects with safe management measures in place.

01

02

The Staff Well-Being Committee

Healthy Lifestyle
Promotes active and healthy living by encouraging staff to participate in sports interest groups and through lunchtime talks.

Social & Recreation
Provides avenues for self-improvement and learning while networking with others through learning journeys and workshops.

Kindness Movement
Nurtures a culture of kindness, compassion and volunteerism among staff for the less privileged in our society.

Recognition and Awards

Each year, deserving staff are recognised for their exemplary service and work via the Excellent Service Award and Divisional Star Award. In 2020, 46 staff were commended for providing excellent service to internal and external customers.

This past year, 237 staff received their Long Service Award for their contributions towards building and caring for our City in Nature.

01 Staff can now learn to better understand and decipher animal behaviour thanks to professional certification courses in areas such as Animal Welfare & Behaviour and Animal Health.

02 Plants help to evoke our senses, ignite memories and bring about general mental well-being. Staff can discover more about such principles as part of therapeutic horticulture.

FACTS & FIGURES FY 2020

National Day Awards 2020

Note: Staff appointments indicated on this page are accurate as of when the Awards were announced.

Public Administration Medal (Silver)

Mr Damian Tang
Senior Director / Design

Public Administration Medal (Bronze)

Dr Charlene Judith Fernandez
Director / Centre for Animal & Veterinary Sciences
Professional & Scientific Services

Mr Lew Chee Keong
Director / Facilities Mgt & Facilities (Singapore Botanic Gardens, Fort Canning Park & Jurong Lake Gardens)
Corporate Services

Ms Terri Oh
Director / Education
Singapore Botanic Gardens

Ms Wendy Seah
Director / Programming & Events
Programming & Events

Commendation Medal

Mr Andy Dinesh
Deputy Director / Prosecution
Corporate Services

Ms Eslindah binte Ismail
Deputy Director / Parks
Parks West

Ms Lui Yock Siew
Deputy Director / CUGE
Industry & CUGE

Mr Soon Hwee Yeow Jason
Deputy Director / Human Resource
Corporate Services

Mr Taufik bin Mohamed Ibrahim
Deputy Director / Streetscape
Streetscape

Ms Toh Yuet Hsin
Deputy Director / Conservation
Conservation

Mr Woo Kok Seng
Deputy Director / Facilities Mgt & Facilities (Jurong Lake Gardens)
Corporate Services

Efficiency Medal

Ms Farhanah binte Hamid
Senior Executive / Administration
National Biodiversity Centre

Ms Lim Joo Gek
Manager / Development Management
Parks Development

Mr Mohamad Idrus bin Mohamad Noor
Senior Officer / Streetscape
Streetscape

Mr Soh Swee Meng
Senior Officer / Conservation
Conservation

Ms Leong Sandy
Senior Lab Technologist
Professional & Scientific Services

Long Service Medal

Mr Kenneth Er
Chief Executive Officer

Ms Choi Yook Sau
Deputy Director / Conservation
Conservation

Ms Haslin binte Salleh
Assistant / Corporate Strategy & Planning
Corporate Strategy & Planning

Ms Loh Chay Hwee
Deputy Director / Community in Bloom
Horticulture & Community Gardening

Mr Mohamed Nasir bin Abdullah
Officer / Conservation
Conservation

Mr Phuah Kok Wei Brendon
Snr Officer/ Hort Outreach & Heritage Trees
Horticulture & Community Gardening

Mr Tan Chin Peng
Deputy Director / Streetscape
Streetscape

Ms Teo Sunia Corina
Senior Manager / Conservation
Conservation

Ms Wong Wai Kwan
Deputy Director
Professional & Scientific Services

Awards and Accolades

Australian Institute of Horticulture Inc.

Green Space (International) Award
Jurong Lake Gardens

Share Bronze Award 2020

IT Awards

United Nations World Summit Information Society (WSIS) Prize 2020 Award (Champion of e-Environment category)

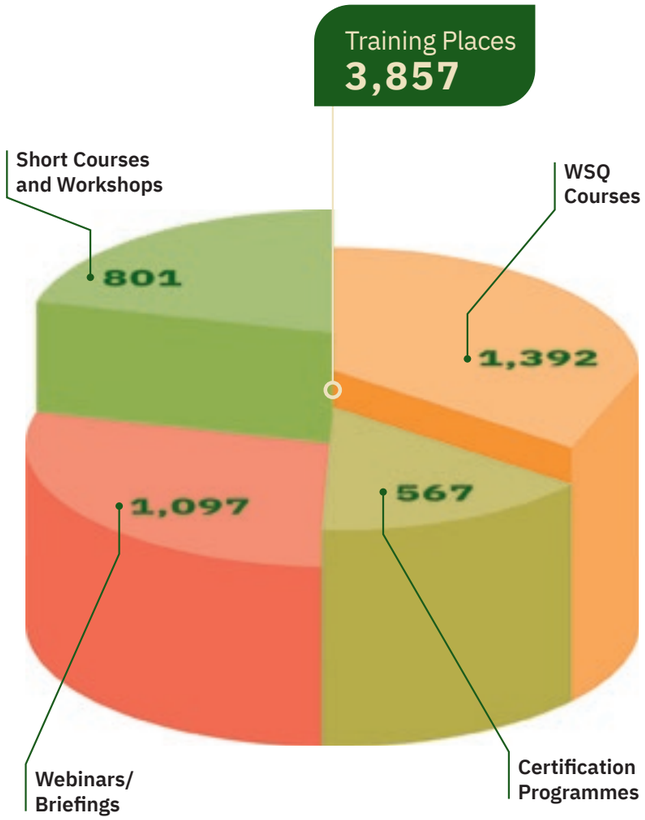
GeoSpatial World Excellence Awards 2020

Singapore Botanic Gardens

FACTS & FIGURES FY 2020

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 as a one-stop training and knowledge hub in urban greenery and ecology.



Workforce Skills Qualification (WSQ) Courses

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

Professional Certification Programmes

- Animal Health Professional Certification Programme
- Animal Welfare Behaviour Professional Certification Programme Module 1
- Animal Welfare Behaviour Professional Certification Programme Module 2
- Animal Welfare Behaviour Professional Certification Programme Module 3
- Animal Management Professional Certification Programme Basic
- Animal Management Professional Certification Programme – Intermediate Elective Reptiles
- Animal Management Professional Certification Programme – Intermediate Elective Mammals
- Animal Management Professional Certification Programme – Intermediate Elective Community Animals (Cat)
- Animal Management Professional Certification Programme – Intermediate Elective Community Animals (Dog)
- Certified Playground Safety Inspector Programme
- Certified Practising Horticulturist Programme
- ISA Certified Arborist Preparatory Programme

Webinars / Briefings

- Animal Welfare Webinar: Science Behind Animal Behaviour Series: The Science of Canine Behaviour
- Animal Welfare Webinar: Science Behind Animal Behaviour Series: The Science of Feline Behaviour
- Briefings on Greenery Planning and Management
- Research Webinar: What Lies beneath? Illuminating the Unseen Nature Below Ground

Seminars / Workshops / Skill Certificates

- Basic Drone Operation Theory, Practical and Assessment
- Behavioural Ecology, Animal Welfare and Ethics Course
- Certificate in Basic Plant Recognition (Module 1)
- Certificate in Cat Welfare Assessment
- Certificate in Ecology Management
- Ecological Approaches to Planting Design and Management
- Landscape Safety Orientation Course
- Leafy Edibles – Train the Trainers
- Pneumatic Blowpipe and Dart Gun Refresher
- Responsible Care and Use of Laboratory Animals
- Soil Regeneration Training
- The Social and Therapeutic Horticulture Programme – Home Gardening
- Tree Decay – The Fundamentals
- Tree Inspection – The Basics
- Tree Inspection – Advanced
- Tree Inspection – Failure Documentation and Analysis
- Tropical Tree Identification

FACTS & FIGURES FY 2020

Regional Parks Maintained by NParks

	AREA (HA)
Admiralty Park	25.67
Ang Mo Kio Linear Park	6.24
Ang Mo Kio Town Garden East	4.88
Ang Mo Kio Town Garden West	20.63
Armenian Street	0.35
Bedok Reservoir Park	40.39
Bedok Town Park	13.66
Bishan-Ang Mo Kio Park	60.58
Bukit Batok Nature Park	35.74
Bukit Batok Town Park (Little Guilin)	41.60
Bukit Timah Nature Reserve	162.64
Central Catchment Nature Reserve	455.00
Changi Beach Park	28.85
Chestnut Nature Park	81.00
Choa Chu Kang Park	10.41
Clementi Woods Park	11.48
Coney Island Park	76.80
Dairy Farm Nature Park	63.00
Dhoby Ghaut Green	1.00
Duxton Plain Park	1.28
East Coast Park	243.28
Empress Place	1.52
Esplanade Park	2.40
Fort Canning Park	22.61
Hampstead Wetlands Park	3.23
Handy Road	0.27
Hindhede Nature Park	9.00
Hong Lim Park	1.28
HortPark	24.04
Istana Park	1.29
Jurong Central Park	7.98
Jurong Lake Gardens	53.00
Kallang Riverside Park	5.16
Kent Ridge Park	48.40
Kranji Marshes Park	56.29
Kranji Reservoir Park	3.78
Labrador Nature Reserve and Park	22.78
Lower Peirce Reservoir Park	10.00
Lower Seletar Reservoir Park	8.49
MacRitchie Reservoir Park	12.00
Marsiling Park	11.35
Mount Faber Park	58.80
one-north Park	3.39
Orchard Fountain Corner	0.06
Pasir Ris Park	73.39
Pasir Ris Town Park	12.36
Pearl's Hill City Park	8.50
Penang Rd Open Space	0.24
Pulau Ubin Recreation Area	692.18
Punggol Park (including Extension)	16.66
Punggol Waterway Park	12.30
Raffles Place Park	0.88
Sembawang Hot Spring Park	1.12
Sembawang Park	15.58
Sengkang Riverside Park	21.08
Singapore Botanic Gardens	82.00
Sisters' Islands Marine Park	47.68
Springleaf Nature Park	18.28
Sun Plaza Park	9.60
Sungei Buloh Wetland Reserve	193.31
Tampines Eco-Green	36.61
Telok Ayer Park	0.49
Telok Blangah Hill Park	36.88
Thomson Nature Park	51.17
Tiong Bahru Park	3.33
Toa Payoh Town Park	4.91
Upper Peirce Reservoir Park	4.00
Upper Seletar Reservoir Park	15.00
War Memorial Park	1.74
Waterboat House Garden	0.07
West Coast Park	50.13
Windsor Nature Park	75.00
Woodlands Town Park East	5.04
Woodlands Waterfront Park	11.22
Yishun Park	13.22
Youth Olympic Park	0.66
Zhenghua Nature Park	17.30
TOTAL	**3,282.71***

TOTAL NUMBER OF PARKS	AREA (HA)
Regional parks	78
Neighbourhood parks	318
TOTAL	**396**

* Subject to rounding adjustments

TOTAL AREA MAINTAINED	AREA (HA)
Parks, playgrounds, open spaces, fitness corners and park connectors*	2,794.33
Nature reserves	3,347
Istana and Parliament House grounds	42
Roadside greenery	2,105.97
Vacant state land	74.01
State land taken over as at Mar 2021**	4,734.97
TOTAL	**13,098.28**

TOTAL MILEAGE OF THE PARK CONNECTORS MAINTAINED IS 362.5 KILOMETRES AS OF 31 MARCH 2021

Plant Health

IMPORT, PERMITS AND INSPECTIONS	
Import permits issued	35,000
Post-entry inspections conducted	1,331

Animal Health and Welfare

LICENCES, PERMITS, AND HEALTH CERTIFICATES ISSUED FOR ANIMAL IMPORTS	
Animals (excluding livestock)	3,215
Biologics	257
Birds	135
Eggs for research	1
Products (blood, sera, urine, clinical specimens)	973
Ornamental fish (export health certificates)	3,544
Ornamental fish (import permits)	5,225
TOTAL	**13,350**

TYPES OF ANIMAL DISEASE SURVEYED IN LOCAL FARMS	
Captive bird farms » Bird flu » Newcastle disease	3
Ornamental fish farms » *Aeromonas salmonicida* » Chytrid fungus » Epizootic haematopoietic necrosis virus » Infectious haematopoietic necrosis virus » Infectious spleen and kidney necrosis virus » Koi herpes virus » Megalocytivirus » Spring viraemia carp virus » Viral haemorrhagic septicaemia » White spot disease	53

ANIMAL DISEASES UNDER NPARKS BIOSURVEILLANCE PROGRAMMES

- *Aeromonas salmonicida*
- African horse sickness
- African swine fever
- Anaplasmosis
- Antimicrobial resistance
- Avian influenza
- Babesiosis
- Bluetongue
- Brucellosis
- Campylobacteriosis
- Canine distemper
- Canine influenza
- Chytridiomycosis
- Classical swine fever
- Coronaviruses
- Cryptococcosis
- Cryptosporidiosis
- *Escherichia coli* O157:H7
- Ehrlichiosis
- Epizootic ulcerative syndrome
- Foot-and-mouth disease
- Heartworm
- Koi herpes virus
- Leishmaniosis
- Leptospirosis
- Lyme disease
- Newcastle disease
- Nipah virus disease
- Parvovirus
- *Plasmodium knowlesi*
- Psittacosis
- Rabies
- *Salmonella* Enteritidis
- Spring viraemia of carp virus
- Swine influenza
- Toxoplasmosis
- White spot disease

LICENSING VETERINARIANS AND VETERINARY CENTRES	
Number of veterinarians	457
Number of veterinary centres	101

GRADING OF PET SHOPS	
Grade A	232
Grade B	16
Grade C	0
Grade D	0
Not graded***	54

DOG LICENSING AND ENFORCEMENT	
Dog licences issued	~72,000
New licences	~13,000
Renewed licences (includes multi-year licences)	~59,000

* 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.
*** Newly licensed pet shops that have not been graded yet.

CORPORATE GOVERNANCE FY 2020

Board Members

NParks is overseen by a Board comprising 11 members. All Board members are non-executive members, except the Chief Executive Officer. The Board derives its strength from the extensive and complementary backgrounds, qualifications and experience of its members.

The Board provides strategic direction and guidance on policies and strategies relating to NParks' vision, mission, objectives, and performance of its functions. In addition, it oversees NParks' operating and financial performance taking into account NParks' budget, expenses, assets, transactions and projects.

In discharging its duties, the Board is supported by the following committees:

Audit Committee

The Audit Committee comprises four non-executive Board members. It plays a key role in ensuring 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, and reviews the effectiveness of internal audit.

Chairman
Mr Guy Harvey-Samuel

Members
Ms Shantini Ramachandra
Mr Musa Fazal
Mr Gerald Tan

Human Resource and Compensation Committee

The Human Resource and Compensation Committee comprises three non-executive Board members. Its role is to review key human resource policies and provide strategic oversight of related risks.

Chairman
Mr Cheng Hsing Yao

Members
Prof David Chan
Ms Nur Hidayah Abu Bakar

Operations Risk Committee

The Operations Risk Committee comprises three non-executive Board members, including the Chairman of the Board. Its role is to provide strategic oversight of NParks' operations risk management framework and conduct reviews of NParks' operations risks. The Operations Risk Committee also oversees the implementation of risk mitigation plans, policies and practices.

Chairman
Mr Benny Lim

Members
Mr George Huang
Ms Tham Loke Kheng

Garden City Fund Management Committee

The Garden City Fund Management Committee manages and administers the Garden City Fund, a registered charity and an Institution of Public Character, to plan, develop, promote and manage the Garden City Fund in accordance with its Trust Deed.

Please refer to pg 40 for the work of Garden City Fund in the year in review.

Punggol Park Connector

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 provides the Board members adequate information during Board meetings and on an ongoing basis. The Board also has direct and independent access to the Management Team if further information and explanation are required.

Code of Conduct

Members of the Board are guided by a set of key principles and guidelines to ensure fairness and impartiality when they carry out their responsibilities, as well as to uphold the integrity and reputation of the Public Service, including adhering to the Public Sector (Governance) Act (Act 5 of 2018).

Accountability and Audit

The Board's accounts are audited by the Auditor-General or such other auditor who 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 2021 was Ernst & Young LLP. The audited financial statements and the auditor's report were submitted to the Board and the Ministry of National Development, and also presented to Parliament.

Internal Control Framework

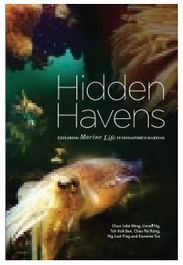
NParks' internal control system ensures that assets are safeguarded, proper accounting records are maintained, and financial information is reliable. The overall control framework includes:

- 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), Public Sector (Governance) Act (Act 5 of 2018), Statutory Board 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.

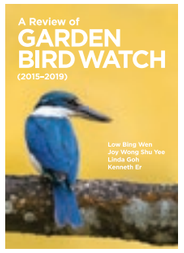
Publications

Books

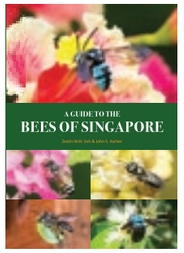
Tropical Plants in Focus – Botanical Illustration at the Singapore Botanic Gardens
By Michele Rodda



Hidden Havens – Exploring Marine Life in Singapore's Marinas
By Chou Lok Ming, Lionel Ng, Toh Kok Ben, Cheo Pei Rong, Ng Juat Ying and Karenne Tun
Published in collaboration with NUS.



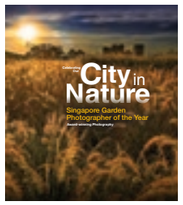
A Review of Garden Bird Watch (2015–2019)
By Low Bing Wen, Joy Wong Shu Yee, Linda Goh and Kenneth Er



A Guide to the Bees of Singapore
By Zestin W.W. Soh and John S. Ascher
Published in collaboration with NUS.

1001 Garden Plants in Singapore – A New Compendium
By Soh Weijing, Tamako Kobayashi, Dr Jennie Tang, Jessica Teo, Pauline Tay and Low Wei Teng

A Guide to the Sculptures of the Singapore Botanic Gardens
By Grace Lee, Ada Davis, Tan Miao Yuan and Tan Wan Xin



Celebrating Our City in Nature – Singapore Garden Photographer of the Year
Edited by Wong Tuan Wah, Linda Goh, Ada Davis and Victoria Cheong

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.

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.

Footprints on an Island – Rediscovering Pulau Ubin
By Chua Ee Kiam, Choo Mui Eng and Wong Tuan Wah
Footprints on an Island – Rediscovering Pulau Ubin won the Nautilus 2016 Silver Award in the Multicultural & Indigenous category, and was recognised in the One-Of-A-Kind Publication (Green) category at the 30th Annual APEX Awards for Publication Excellence competition.

Gingers of Cambodia, Laos & Vietnam
By Jana Leong-Škorničková and Mark Newman

A Walk Through History – A Guide to the Singapore Botanic Gardens
By Nigel Taylor and Ada Davis

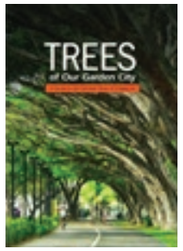
Migratory Birds of Sungei Buloh Wetland Reserve
By James Gan, Mendis Tan and David Li

My Green Space: Indoor Gardening
By Lily Chen, Ng Shan Jun, Ang Wee Foong, et al.

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

Native Orchids of Singapore – Diversity, Identification and Conservation
By Yam Tim Wing

Dragonflies of Our Parks and Gardens
By Robin Ngiam



Trees of Our Garden City
Edited by Tee Swee Ping

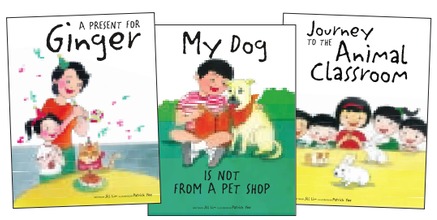
Caterpillars of Singapore's Butterflies
By Horace Tan and Khew Sin Khoon

Birds of Our Wetlands – A Journey Through Sungei Buloh Wetland Reserve
Edited by Wong Tuan Wah, Victoria Cheong, Ada Davis, How Choon Beng, David Li, Low Bing Wen, Florence Sim and Yang Shufen

The Nature of Poetry
Edited by Edwin Thumboo and Eric Tinsay Valles

Flora of Singapore, Volume 1 (Introduction), Volume 7 (Poales), Volume 13 (Gentianales)
Edited by David Middleton, Stuart Lindsay and Jana Leong-Škorničková

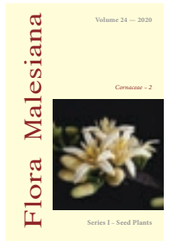
The Hunt for the Green Boomerang, Secrets of the Swamp
By Neil Humphreys and illustrated by Cheng Puay Koon
Secrets of the Swamp won the Best Book award for 6-8 year olds in the 2014 Harper's Bazaar Junior Toy Awards.



A Present for Ginger, My Dog is Not from a Pet Shop, Journey to the Animal Classroom
By Jill Lim and illustrated by Patrick Yee

Journals

The Gardens Bulletin, June 2020 & Dec 2020



Flora Malesiana Cornaceae – 2

Periodicals

Gardenwise, Aug 2020 & Feb 2021

CITYGREEN, Issue 18 Fort Canning Park
The CUGE publication CITYGREEN won the APEX Awards 2020 and Hermes Creative Awards 2019.

SCAN QR CODE TO VIEW FULL LIST OF PUBLICATIONS:

Staff Publications

April 2020 – March 2021

Books and Reports

Antonelli, A. et al. [200+ authors including **Wong, K.M.**] (2020). *State of the World's Plants and Fungi 2020.* London: Royal Botanic Gardens, Kew.

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[*P. borneense*] e.T113756502A113756506,
[*P. diversifolium*] e.T164122361A164124467,
[P. glabrum] e.T113756592A113756615,
[*P. grewiifolium*] e.T164124432A164124482,
[*P. havilandii*] e.T113756629A113756633,
[*P. jackianum*] e.T164123600A164124477,
[*P. javanicum*] e.T61787032A61787059,
[*P. merrillianum*] e.T113756740A113756744,
[*P. niveum*] e.T113756775A113756778,
[*P. pecteniforme*] e.T164122397A164124472,
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April 2020 – March 2021

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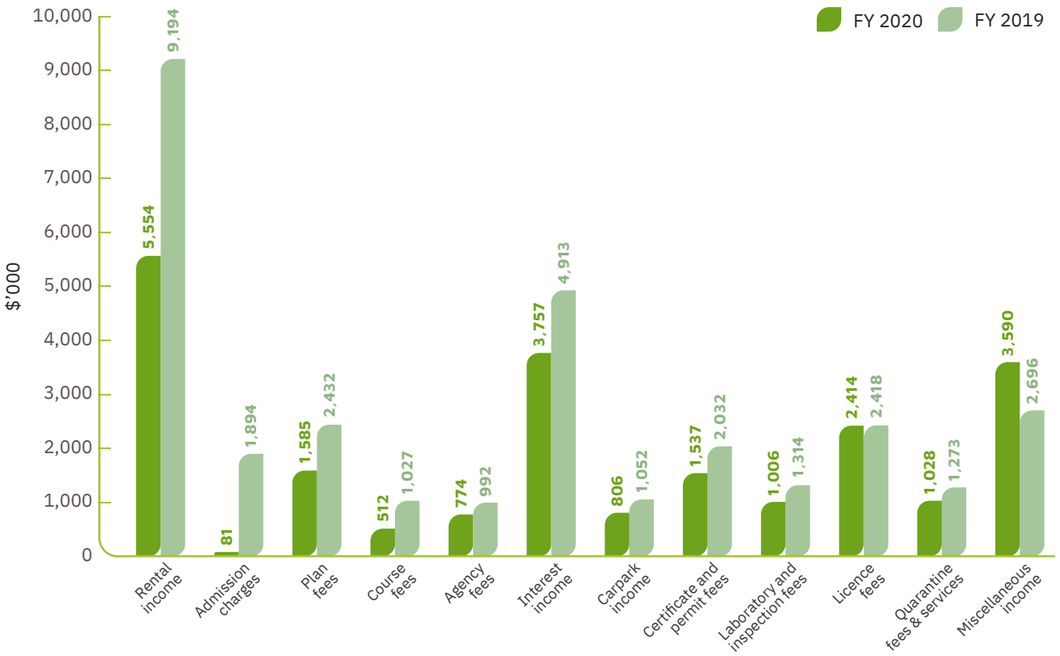
FINANCIAL REVIEW

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 $22.6 million. The decrease from last year's income was mainly due to the decrease in rental income, interest income and admission charges.

Income for FY 2020 & FY 2019

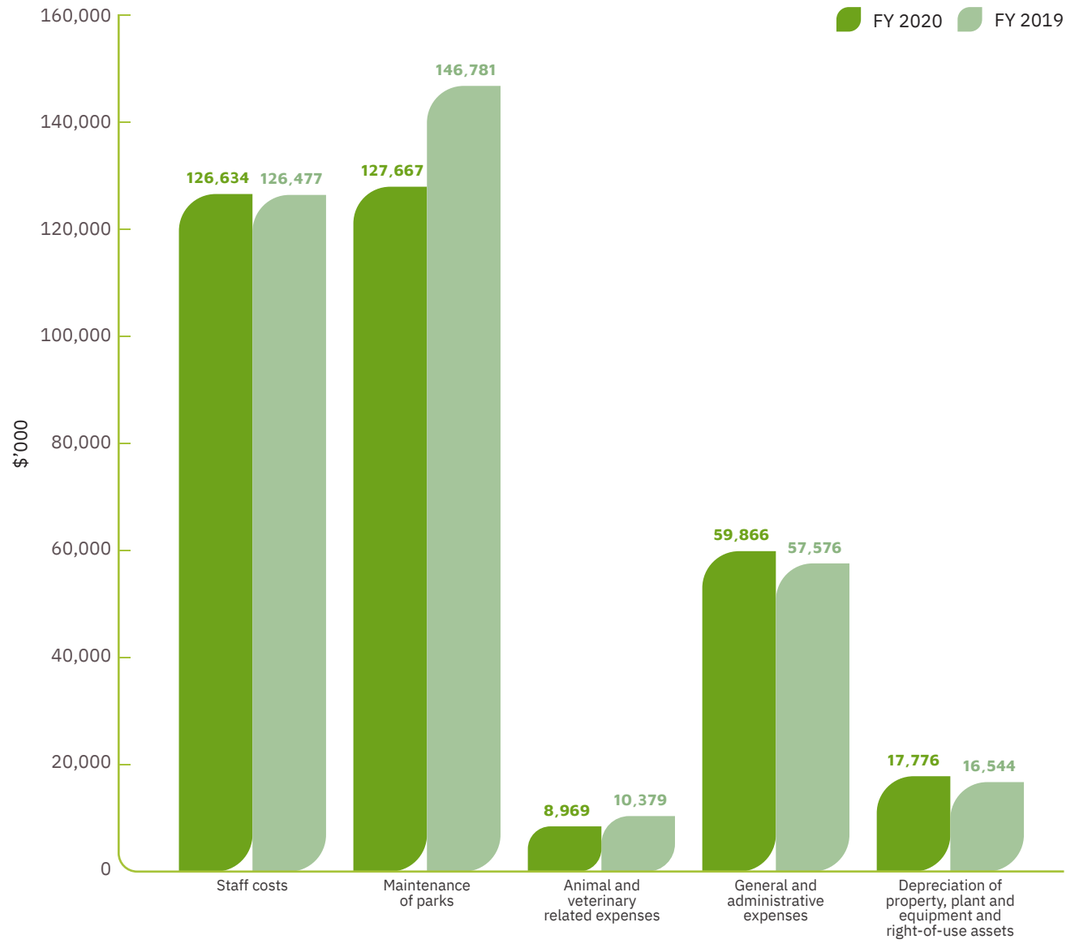


INCOME	FY 2020 $ '000	FY 2019 $ '000	INCREASE/(DECREASE) $ '000	% CHANGE
Rental income	5,554	9,194	(3,640)	(40)
Admission charges	81	1,894	(1,813)	(96)
Plan fees	1,585	2,432	(847)	(35)
Course fees	512	1,027	(515)	(50)
Agency fees	774	992	(218)	(22)
Interest income	3,757	4,913	(1,156)	(24)
Carpark income	806	1,052	(246)	(23)
Certificate and permit fees	1,537	2,032	(495)	(24)
Laboratory and inspection fees	1,006	1,314	(308)	(23)
Licence fees	2,414	2,418	(4)	<(1)
Quarantine fees and services	1,028	1,273	(245)	(19)
Miscellaneous income	3,590	2,696	894	33
	22,644	**31,237**	**(8,593)**	**(28)**

Operating Expenditure

The Group's operating expenditure for the year was $340.9 million. The 5% decrease from last year's expenditure was mainly due to the decrease in maintenance of parks and animal and veterinary related expenses, offset by the increase in general and administrative expenses.

Operating Expenditure for FY 2020 & FY 2019



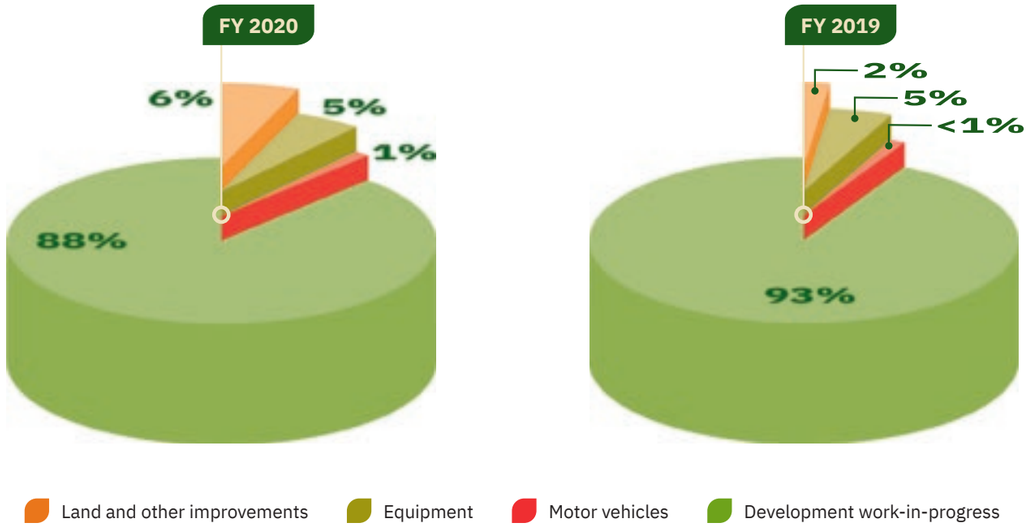
OPERATING EXPENDITURE	FY 2020 $ '000	FY 2019 $ '000	INCREASE/(DECREASE) $ '000	% CHANGE
Staff costs	126,634	126,477	157	< 1
Maintenance of parks	127,667	146,781	(19,114)	(13)
Animal and veterinary related expenses	8,969	10,379	(1,410)	(14)
General and administrative expenses	59,866	57,576	2,290	4
Depreciation of property, plant and equipment and right-of-use assets	17,776	16,544	1,232	7
	340,912	**357,757**	**(16,845)**	**(5)**

FINANCIAL REVIEW

Capital Expenditure

The Group's capital expenditure for the year was $16.0 million. The decrease in capital expenditure was mainly due to the decrease in the improvement works carried out in Singapore Botanic Gardens and Fort Canning Park.

Capital Expenditure for FY 2020 & FY 2019

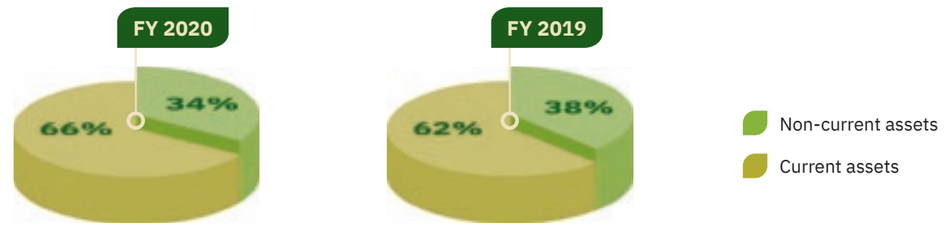


CAPITAL EXPENDITURE	FY 2020 $ '000	FY 2019 $ '000	INCREASE/(DECREASE) $ '000	% CHANGE
Land and other improvements	923	940	(17)	(2)
Equipment	824	1,980	(1,156)	(58)
Motor vehicles	200	113	87	77
Development work-in-progress	14,022	40,555	(26,533)	(65)
	15,969	**43,588**	**(27,619)**	**(63)**

Financial Position

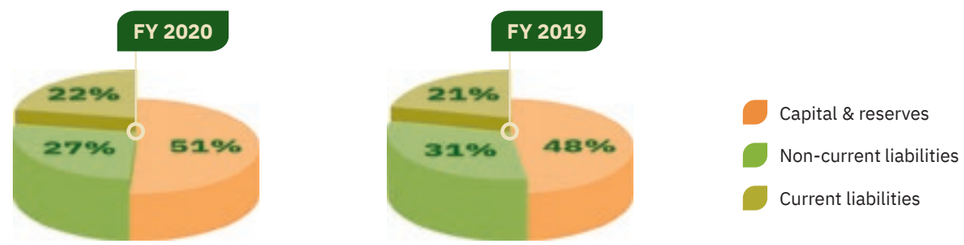
As at 31 March 2021, the Group's total assets stood at $616.5 milion, an increase of 8% over last year. Non-current assets and current assets represent 34% and 66% of total assets respectively. Non-current assets consisted mainly of leasehold land and buildings and structures at Singapore Botanic Gardens and Fort Canning Park as well as the structures at Animal & Plant Health Centre, Animal Quarantine Station and Animal Management Centre. Capital and reserve stood at $318.0 million, while non-current liabilities and current liabilities stood at $164.6 million and $133.8 million respectively.

Total Assets



ASSETS	FY 2020 $ '000	FY 2019 $ '000	INCREASE/(DECREASE) $ '000	% CHANGE
Non-current assets	210,261	216,107	(5,846)	(3)
Current assets	406,206	355,141	51,065	14
	616,467	**571,248**	**45,219**	**8**

Total Liabilities & Equity



EQUITY & LIABILITIES	FY 2020 $ '000	FY 2019 $ '000	INCREASE/(DECREASE) $ '000	% CHANGE
Capital & reserves	318,037	271,717	46,320	17
Non-current liabilities	164,642	178,441	(13,799)	(8)
Current liabilities	133,788	121,090	12,698	10
	616,467	**571,248**	**45,219**	**8**

Financial Statements

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Financial Statements

Statement by National Parks Board

In our opinion,

(a) the accompanying financial statements of National Parks Board ("NParks") and its subsidiary (the "Group"), are properly drawn up in accordance with the provisions of the National Parks Board Act, Chapter 198A (the "Act"), the Public Sector (Governance) Act 2018 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 2021, 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) the receipt, expenditure, investments of moneys and the acquisition and disposal of assets by NParks during the year have been, in all material respects, in accordance with the provisions of the Act, the Public Sector (Governance) Act and the requirements of any other written law applicable to money of or managed by NParks; and

(c) proper accounting and other records have been kept, including records of all assets of NParks whether purchased, donated or otherwise.

On behalf of National Parks Board and its subsidiary:

Benny Lim
Chairman

Kenneth Er Boon Hwee
Chief Executive Officer

Singapore
14 July 2021

Independent Auditor's Report

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of National Parks Board ("NParks") and its subsidiary (collectively, the "Group"), which comprise the statements of financial position of the Group and NParks as at 31 March 2021, the statements of comprehensive income, statements of changes in equity of the Group and NParks and the consolidated cash flow statement of the Group for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements of the Group, 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 National Parks Board Act, Chapter 198A (the "Act"), the Public Sector (Governance) Act 2018, Act 5 of 2018 (the 'Public Sector (Governance) Act") and Statutory Board Financial Reporting Standards ("SB-FRS"), so as to present fairly, in all material respects, the state of affairs of the Group and NParks as at 31 March 2021 and the results and changes in equity of Group and NParks and cash flows of the Group for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Group in accordance with the Accounting and Corporate Regulatory Authority ("ACRA") *Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities* ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report and the statement by National Parks Board, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independent Auditor's Report

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

Responsibilities of management for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the provisions of the Act, the Public Sector (Governance) Act and SB-FRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

A statutory board is constituted based on its constitutional act and its dissolution requires Parliament's approval. In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless there is intention to wind up the Group or for the Group to cease operations.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

Independent Auditor's Report

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the management regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

Opinion

In our opinion:

(a) the receipts, expenditure, investments of moneys and the acquisition and disposal of assets by the Board during the year are, in all material respects, in accordance with the provisions of the Act, the Public Sector (Governance) Act and the requirements of any other written law applicable to moneys of or managed by NParks.

(b) proper accounting and other records have been kept, including records of all assets of NParks whether purchased, donated or otherwise.

Basis for opinion

We concluded our audit in accordance with SSAs. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Compliance Audit* section of our report. We are independent of the Group in accordance with the ACRA Code together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management's compliance.

Responsibilities of management for compliance with legal and regulatory requirements

Management is responsible for ensuring that the receipts, expenditure, investments of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act, the Public Sector (Governance) Act and the requirements of any other written law applicable to moneys of or managed by NParks. This responsibility includes monitoring related compliance requirements relevant to NParks, and implementing internal controls as management determines are necessary to enable compliance with the requirements.

Independent Auditor's Report

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

Auditor's responsibilities for compliance audit

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investments of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act, the Public Sector (Governance) Act and the requirements of any other written law applicable to moneys of or managed by NParks.

Our compliance audit includes obtaining an understanding of the internal control relevant to the receipts, expenditure, investments 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 NParks' internal control. Because of the inherent limitations in any internal control system, non-compliances may nevertheless occur and not be detected.

Ernst & Young LLP
Public Accountants and
Chartered Accountants
Singapore

14 July 2021

Statement of Financial Position

AS AT 31 MARCH 2021

	NOTE	GROUP 2020/2021 $	GROUP 2019/2020 $	NPARKS 2020/2021 $	NPARKS 2019/2020 $
ASSETS					
Current assets					
Cash and cash equivalents	6	386,094,921	326,302,213	385,747,762	325,950,436
Trade receivables	7	3,899,264	6,154,896	3,879,764	6,154,896
Other receivables	8	10,550,111	17,010,184	10,555,081	17,030,951
Prepayments		4,156,953	4,104,987	4,155,603	4,103,611
Lease receivables	26	1,505,204	1,568,648	1,505,204	1,568,648
Total current assets		406,206,453	355,140,928	405,843,414	354,808,542
Non-current assets					
Trade receivables	7	672,000	672,000	672,000	672,000
Investment in subsidiary	9	–	–	2	2
Property, plant and equipment	10	189,598,757	188,500,678	189,598,757	188,500,678
Right-of-use assets	26	12,314,726	15,601,927	12,314,726	15,601,927
Lease receivables	26	7,675,751	11,332,187	7,675,751	11,332,187
Total non-current assets		210,261,234	216,106,792	210,261,236	216,106,794
Total assets		616,467,687	571,247,720	616,104,650	570,915,336
LIABILITY AND EQUITY					
Current liabilities					
Trade and other payables	12	91,334,640	87,214,317	91,326,491	87,208,686
Provision for pension costs	13	120,000	640,370	120,000	640,370
Government grants received in advance	11	28,330,704	19,153,731	28,330,704	19,153,731
Deferred revenue	14	939,082	2,473,329	919,582	2,473,329
Lease liabilities	26	3,756,851	3,918,766	3,756,851	3,918,766
Contribution to consolidated fund	15	9,306,976	7,689,430	9,306,976	7,689,430
Total current liabilities		133,788,253	121,089,943	133,760,604	121,084,312
Non-current liabilities					
Deferred capital grants	16	144,964,226	150,009,241	144,964,226	150,009,241
Deferred revenue	14	1,885,235	1,915,378	1,885,235	1,915,378
Lease liabilities	26	16,117,838	24,860,951	16,117,838	24,860,951
Provision for pension costs	13	1,674,978	1,655,767	1,674,978	1,655,767
Total non-current liabilities		164,642,277	178,441,337	164,642,277	178,441,337

	NOTE	GROUP 2020/2021 $	GROUP 2019/2020 $	NPARKS 2020/2021 $	NPARKS 2019/2020 $
Capital and other funds					
Share capital	17	27,946,236	22,030,064	27,946,236	22,030,064
Capital account	18	4,528,275	4,528,275	4,528,275	4,528,275
Other reserve	19	18,049,937	18,050,018	18,049,937	18,050,018
Accumulated surplus		267,512,709	227,108,083	267,177,321	226,781,330
Total capital and other funds		318,037,157	271,716,440	317,701,769	271,389,687
Total liabilities and equity		616,467,687	571,247,720	616,104,650	570,915,336
Net assets of Garden City Fund	20	12,935,234	10,985,124	12,935,234	10,985,124
Net assets of National Productivity Fund	21	1,531	161,642	1,531	161,642

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

Statement of Comprehensive Income

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

	NOTE	GROUP 2020/2021	GROUP 2019/2020	NPARKS 2020/2021	NPARKS 2019/2020
		$	$	$	$
INCOME OR EXPENDITURE					
Operating income					
Rental income		5,553,333	9,193,260	5,553,333	9,193,260
Admission charges		80,688	1,894,254	80,688	1,894,254
Plan fees		1,584,919	2,431,547	1,584,919	2,431,547
Course fees		511,726	1,027,487	511,726	1,027,487
Agency fees		774,365	992,261	774,365	992,261
Interest income		3,757,456	4,912,501	3,754,004	4,912,501
Carpark income		806,474	1,052,014	806,474	1,052,014
Certificates and permit fees		1,536,970	2,032,459	1,536,970	2,032,459
Laboratory and inspection fees		1,006,101	1,313,941	1,006,101	1,313,941
Licence fees		2,414,384	2,418,249	2,414,384	2,418,249
Quarantine fees and services		1,028,126	1,272,991	1,028,126	1,272,991
Miscellaneous income	22	3,589,768	2,696,145	3,576,647	2,601,676
Total income	22	22,644,310	31,237,109	22,627,737	31,142,640
Operating expenditure					
Staff costs	23	(126,633,982)	(126,477,281)	(126,633,982)	(126,477,281)
Maintenance of parks		(127,667,424)	(146,780,912)	(127,667,424)	(146,780,912)
Animal and veterinary related expenses		(8,968,819)	(10,379,363)	(8,968,819)	(10,379,363)
General and administrative expenses		(59,865,914)	(57,575,771)	(59,857,976)	(57,524,979)
Depreciation of property, plant and equipment and right-of-use assets	10, 26	(17,776,474)	(16,544,117)	(17,776,474)	(16,544,117)
		(340,912,613)	(357,757,444)	(340,904,675)	(357,706,652)
Deficit from operations	24	(318,268,303)	(326,520,335)	(318,276,938)	(326,564,012)
Government operating grants	11	358,618,910	353,373,730	358,618,910	353,373,730
Other government grants	11	2,286,697	5,758,914	2,286,697	5,758,914
Deferred capital grants amortised	16	12,118,246	12,663,310	12,118,246	12,663,310
		373,023,853	371,795,954	373,023,853	371,795,954
Surplus before contribution to consolidated fund		54,755,550	45,275,619	54,746,915	45,231,942
Contribution to consolidated fund	15	(9,306,976)	(7,689,430)	(9,306,976)	(7,689,430)
Surplus for the year, representing total comprehensive income for the year		45,448,574	37,586,189	45,439,939	37,542,512

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

Statement of Changes in Equity

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

GROUP	SHARE CAPITAL	CAPITAL ACCOUNT	OTHER RESERVE	ACCUMULATED SURPLUS[1]	TOTAL
	$	$	$	$	$
At 1 April 2019	6,436,238	4,528,275	–	200,261,878	211,226,391
Transferred from AVA on 1 April 2019	9,539,511	–	18,050,018	–	27,589,529
Surplus for the year, representing total comprehensive income for the year	–	–	–	37,586,189	37,586,189
Transactions with owners, recognised directly in equity					
Equity injection (Note 17)	6,054,315	–	–	–	6,054,315
Funding for government projects (Note 25)	–	–	–	(10,739,984)	(10,739,984)
Total transactions with owners, in their capacity as owners	6,054,315	–	–	(10,739,984)	(4,685,669)
At 31 March 2020 and 1 April 2020	22,030,064	4,528,275	18,050,018	227,108,083	271,716,440
Surplus for the year, representing total comprehensive income for the year	–	–	–	45,448,574	45,448,574
Transactions with owners, recognised directly in equity					
Equity injection (Note 17)	5,916,172	–	–	–	5,916,172
Funding for government projects (Note 25)	–	–	–	(5,044,029)	(5,044,029)
Transfer to other reserve (Note 19)	–	–	(81)	81	–
Total transactions with owners, in their capacity as owners	5,916,172	–	(81)	(5,043,948)	872,143
At 31 March 2021	27,946,236	4,528,275	18,049,937	267,512,709	318,037,157

(1) Included in accumulated surplus is an amount of $68,563,892 (2019/2020: $$63,621,836) which has been earmarked by the Group to fund future replacement and capital improvement of property, plant and equipment.

NPARKS	SHARE CAPITAL	CAPITAL ACCOUNT	OTHER RESERVE	ACCUMULATED SURPLUS[1]	TOTAL
	$	$	$	$	$
At 1 April 2019	6,436,238	4,528,275	–	199,978,802	210,943,315
Transferred from AVA on 1 April 2019	9,539,511	–	18,050,018	–	27,589,529
Surplus for the year, representing total comprehensive income for the year	–	–	–	37,542,512	37,542,512
Transactions with owners, recognised directly in equity					
Equity injection (Note 17)	6,054,315	–	–	–	6,054,315
Funding for government projects (Note 25)	–	–	–	(10,739,984)	(10,739,984)
Total transactions with owners, in their capacity as owners	6,054,315	–	–	(10,739,984)	(4,685,669)
At 31 March 2020 and 1 April 2020	22,030,064	4,528,275	18,050,018	226,781,330	271,389,687
Surplus for the year, representing total comprehensive income for the year	–	–	–	45,439,939	45,439,939
Transactions with owners, recognised directly in equity					
Equity injection (Note 17)	5,916,172	–	–	–	5,916,172
Funding for government projects (Note 25)	–	–	–	(5,044,029)	(5,044,029)
Transfer to other reserve (Note 19)	–	–	(81)	81	–
Total transactions with owners, in their capacity as owners	5,916,172	–	(81)	(5,043,948)	872,143
At 31 March 2021	27,946,236	4,528,275	18,049,937	267,177,321	317,701,769

(1) Included in accumulated surplus is an amount of $68,563,892 (2019/2020: $63,621,836) which has been earmarked by NParks to fund future replacement and capital improvement of property, plant and equipment.

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

Consolidated Statement of Cash Flows

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

	NOTE	2020/2021	2019/2020
		$	$
Operating activities			
Deficit from operations		(318,268,303)	(326,520,335)
Adjustments for:			
Depreciation of property, plant and equipment and right-of-use assets	10, 26	17,776,474	16,544,117
Loss on disposal of property, plant and equipment	24	37,259	299,295
Gain on lease modifications		(2,430,221)	(151,301)
Provision for pension costs	13	140,165	–
Amortisation of lease premium received in advance		(83,333)	(83,333)
Interest expense	26	841,591	841,983
Interest income		(3,757,456)	(4,912,501)
Operating cash flow before movement in working capital		(305,743,824)	(313,982,075)
Trade and other receivables		1,524,503	(2,730,399)
Trade and other payables		3,550,841	13,222,515
Prepayments		(51,966)	(207,281)
Deferred revenue		(1,481,058)	(275,245)
Payment for pension costs	13	(641,324)	(120,000)
Amounts due from MND		3,990,798	(7,948,741)
Amounts due from Garden City Fund		1,637,492	(2,448,354)
Cash used in operating activities		(297,214,538)	(314,489,580)
Contribution to Consolidated Fund paid		(7,689,430)	(3,388,055)
Net cash flows used in operating activities		(304,903,968)	(317,877,635)
Investing activities			
Proceeds from disposal of property, plant and equipment		50,096	143,836
Proceeds from lease receivables		1,505,557	1,746,009
Purchase of property, plant and equipment	10	(15,969,511)	(43,588,178)
Net cash flows from transfer of AVA non-food functions	19	–	27,548,609
Interest received		5,917,678	4,708,055
Net cash flows used in investing activities		(8,496,180)	(9,441,669)
Financing activities			
Grants received (less payment on behalf)	11	377,154,646	394,238,718
Unutilised grants returned	11	(88,779)	(191,086)
Principal payments of lease liabilities		(3,965,679)	(3,588,001)
Interest paid on lease liabilities	26	(841,591)	(841,983)
Funding from GCF	16	62,116	7,701,772
Equity injection	17	5,916,172	6,054,315
Funding for government projects	25	(5,044,029)	(10,739,984)
Net cash flows from financing activities		373,192,856	392,633,751
Net increase in cash and cash equivalents		59,792,708	65,314,447
Cash and cash equivalents at beginning of the year		326,302,213	260,987,766
Cash and cash equivalents at end of the year (Note 6)		386,094,921	326,302,213

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

Notes to the Financial Statements

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2021

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.

With effect from 1 April 2019, Agri-Food and Veterinary Authority of Singapore ("AVA")'s non-food functions were transferred to NParks. NParks has set up a new Animal and Veterinary Services ("AVS") cluster to take over the animal and plant related functions from AVA.

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. With the transfer of the non-food functions from AVA, NParks activities also include working with the community, such as pet owners and businesses, animal welfare groups and the general public, to protect and promote the welfare of animals through regulation and education, such as encouraging responsible pet ownership.

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

2. Summary of significant accounting policies

2.1 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, the Public Sector (Governance) Act and SB-FRS, including Interpretation of SB-FRS ("INT SB-FRS") and SB-FRS Guidance Notes.

The financial statements are presented in Singapore Dollar (SGD or $), which is the Group's functional currency, and rounded to the nearest dollar.

2.2 Adoption of new and revised standards

The accounting policies adopted are consistent with those of the previous financial year except that in the current financial year, the Group has adopted all the new and revised SB-FRSs, INT SB-FRS and SB-FRS Guidance Notes that are relevant to its operations and are effective for annual financial periods beginning on or after 1 April 2020. The adoption of these standards did not have any material effect on the financial performance or position of the Group and NParks.

2.3 Standards issued but not yet effective

The Group has not adopted the following standards and interpretation applicable to the Group that have been issued but not yet effective:

DESCRIPTION	EFFECTIVE FOR ANNUAL PERIODS BEGINNING ON OR AFTER
Amendment to SB-FRS 116 *Covid-19-Related Rent Concessions*	1 June 2020
SB-FRS Guidance Note 9 Accounting for *Depreciation of Statutory Board-Owned Assets Situated on Land Allocated under Tenancy Agreements Governed by State Land Rules*	1 April 2021
SB-FRS Guidance Note 10 *Accounting for Capital Assets Funded Using Statutory Boards' Reserves on Behalf of the Government*	1 April 2021
Amendments to SB-FRS 16 *Property, Plant and Equipment* Proceeds before Intended Use	1 January 2022
Annual Improvements to SB-FRSs (2018-2020)	1 January 2022
Amendments to SB-FRS 1 *Presentation of Financial Statements* Classification of Liabilities as Current or Non-current	1 January 2023

The Group expect that the adoption of the standards above will have no material impact on the financial statements in the year of initial application.

2.4 Basis of consolidation and business combination

(a) 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.

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 profit or loss.

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. The financial statements of the subsidiary used in the preparation of the consolidated financial statements are prepared for the same reporting date as NParks.

All intra-group balances, income and expenses resulting from intra-group transactions and dividends are eliminated in full.

(b) Business combinations involving entities under common control

A business combination involving entities under common control is a business combination in which all of the combining entities are ultimately controlled by the same party or parties both before and after the business combination.

Business combinations involving entities under common control are accounted for by applying the pooling of interest method which involves the following:

- The assets and liabilities of the combining entities are reflected at their carrying amounts reported in the consolidated financial statements of the controlling company.
- No adjustments are made to reflect the fair values on the date of combination, or recognise any new assets or liabilities.
- No additional goodwill is recognised as a result of the combination.
- Any difference between the consideration paid/transferred and the equity 'acquired' is reflected within the equity as a separate reserve.
- The statement of comprehensive income reflects the results of the combining entities for the full year, irrespective of when the combination took place.

2.5 Financial instruments

(a) Financial assets

Initial recognition and measurement

Financial assets are recognised when, and only when the entity becomes party to the contractual provisions of the instruments.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Trade receivables are measured at the amount of consideration to which the Group expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third party, if the trade receivables do not contain a significant financing component at initial recognition.

Subsequent measurement

Investments in debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the contractual cash flow characteristics of the asset. The three measurement categories for classification of debt instruments are amortised cost, fair value through other comprehensive income and fair value through profit or loss.

Amortised cost

Financial assets that are held for the collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Financial assets are measured at amortised cost using the effective interest method, less impairment. Gains and losses are recognised in profit or loss when the assets are de-recognised or impaired, and through amortisation process.

De-recognition

A financial asset is de-recognised where the contractual right to receive cash flows from the asset has expired. On derecognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received and any cumulative gain or loss that had been recognised in other comprehensive income for debt instruments is recognised in profit or loss.

(b) 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.

Initial recognition and measurement

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

Financial liabilities are recognised when, and only when, the Group becomes a party to the contractual provisions of the financial instrument. The Group determines the classification of its financial liabilities at initial recognition.

All financial liabilities are recognised initially at fair value plus in the case of financial liabilities not at fair value through profit or loss, directly attributable transaction costs.

Subsequent measurement

After initial recognition, financial liabilities that are not carried at fair value through profit or loss are subsequently measured at amortised cost using the effective interest method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised, and through the amortisation process.

De-recognition

A financial liability is de-recognised when the obligation under the liability is discharged or cancelled or expires. On de-recognition, the difference between the carrying amounts and the consideration paid is recognised in profit or loss.

2.6 Impairment of financial assets

The Group recognises an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is recognised for credit losses expected over the remaining life of the exposure, irrespective of timing of the default (a lifetime ECL).

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

2.7 Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

As lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognises lease liabilities representing the obligations to make lease payments and right-of-use assets representing the right to use the underlying leased assets.

(a) Right-of-use assets

The Group recognises right-of-use assets at the commencement date of the lease (i.e. the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

The right-of-use assets are also subject to impairment. The accounting policy for impairment is disclosed in Note 2.9.

(b) Lease liabilities

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate.

Variable lease payments that do not depend on an index or a rate are recognised as expense in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g. changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

(c) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases (i.e. those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short-term leases and leases of low value assets are recognised as expense on a straight-line basis over the lease term.

Subleases

In classifying a sublease, the Group as an intermediate lessor classifies the sublease as a finance or an operating lease with reference to the right-of-use asset arising from the head lease, rather than the underlying asset.

When the sublease is assessed as a finance lease, the Group derecognises the right-of-use asset relating to the head lease that it transfers to the sublessee and recognises the net investment in the sublease within "Lease Receivables". Any differences between the right-of-use asset derecognised and the net investment in sublease is recognised in profit or loss. Lease liability relating to the head lease is retained in the balance sheet, which represents the lease payments owed to the head lessor.

When the sublease is assessed as an operating lease, the Group recognises lease income from the sublease in profit or loss within "Other income". The right-of-use asset relating to the head lease is not derecognised.

As lessor

Leases in which the Group does not transfer substantially all the risks and rewards of ownership of the asset are classified as operating leases. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same bases as rental income. The accounting policy for rental income is set out in Note 2.13.

2.8 Property, plant and equipment

All items of property, plant and equipment are initially recorded at cost. Subsequent to recognition, property, plant and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses.

Depreciation is computed on a straight-line basis over the estimated useful lives of the assets as follows:

Leasehold land	— Over the lease periods of 87 to 99 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.

The carrying amount of property, plants and equipment are reviewed for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable.

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 de-recognised 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 profit or loss.

2.9 Impairment of non-financial assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when an annual impairment testing for an asset is required, the Group makes an estimate of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's fair value less costs of disposal and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Impairment losses are recognised in profit or loss, except for assets that are previously revalued where the revaluation was taken to other comprehensive income. In this case, the impairment is also recognised in other comprehensive income up to the amount of any previous revaluation.

A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increase cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised previously. Such reversal is recognised in profit or loss unless the asset is measured at revalued amount, in which case the reversal is treated as a revaluation increase. Impairment losses relating to goodwill cannot be reversed in future periods.

2.10 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. If it is no longer probable that an outflow of economic resources will be required to settle the obligation, the provision is reversed. If the effect of the time value of money is material provisions and discounted using a current pre-tax rate that reflects, where appropriate, the risk specific to the liability when discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

2.11 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 profit or loss 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.

2.12 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.

2.13 Revenue recognition

Revenue is measured based on the consideration to which the Group expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amount collected on behalf of third parties.

Revenue is recognised when the Group satisfies a performance obligation by transferring a promised good or service to the customer, which is when the customer obtains control of the good or service. A performance obligation may be satisfied at a point in time or over time. The amount of revenue recognised is the amount allocated to the satisfied performance obligation.

Rental income

Rental income receivable under operating leases is recognised in profit or loss 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 in relation to the National Orchid Garden are recognised at a point in time upon the sale of admission tickets. For event admission tickets which are sold in advance, revenue is recognised on the date of event.

Plan fees

Plan fees are recognised at a point in time when the services have been performed and rendered.

Course fees

Course fees are recognised over the duration of the course.

Agency fees

Agency fees are recognised over the period in which the 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.

Carpark income

Carpark income is recognised at a point in time when transacted.

Licence, certificate and permit fees

Licence, certificates and permit fees are recognised at a point in time when licences, certificates or permits are issued.

Laboratory, inspection and quarantine fees

These fees are recognised a point of time when the services have been performed and rendered.

Miscellaneous income

Miscellaneous income comprising income derived from consultancy fees, sale of publications, souvenirs and orchid plantlets, and park usage and barbeque permit fees are recognised at a point in time 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.

2.14 Retirement benefits costs

Payments to defined contribution 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 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.

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.

2.15 Employee leave entitlement

Employee entitlements to annual leave are recognised when they are accrued 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.

2.16 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.

2.17 Cash and cash equivalents

Cash and cash equivalents 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.

2.18 Deferred revenue

Income from rental and lease premium received in advance are stated at initial amount less accumulated amortisation. Amortisation is calculated on a straight-line basis to reduce the initial amount over the lease term and is recognised in profit or loss.

Income from plan fees received in advance is stated at initial amount collected and is recognised in profit or loss when services are performed and rendered.

2.19 Contingencies

A contingent liability is:

(a) a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group; or

(b) a present obligation that arises from past events but is not recognised because:

  (i) It is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or

  (ii) The amount of the obligation cannot be measured with sufficient reliability.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group.

Contingent liabilities and assets are not recognised on the statement of financial position of the Group.

2.20 Funding for government projects

Government projects funded using NParks's accumulated surplus are considered distribution to owners. Accordingly, the amounts are recognised directly in the statement of changes in equity.

2.21 Other reserve

Other reserve represents the accumulated surplus transferred from AVA to NParks on 1 April 2019. The accumulated surplus comprises surpluses arising from unutilised grants that were previously received by AVA for future replacement and capital improvements of property, plant and equipment.

Accordingly, the Group has earmarked this reserve to fund future replacement of the property, plant and equipment that were transferred from AVA as at 1 April 2019. In future, after the replacement assets are purchased, the amount equivalent to the depreciation charged of the replacement assets will be transferred from other reserve to accumulated surplus. The transfer will cease when this reserve is fully utilised.

3. Critical accounting judgements and key sources of estimation uncertainty

The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of the revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities at the end of reporting period. Uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amount of the asset or liability affected in the future periods. Management is of the opinion that there is no significant judgement made in applying accounting policies and no estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period.

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	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Financial assets at amortised cost				
Cash and cash equivalents (Note 6)	386,094,921	326,302,213	385,747,762	325,950,436
Trade receivables (Note 7)	4,571,264	6,826,896	4,551,764	6,826,896
Other receivables (Note 8)	10,550,111	17,010,184	10,555,081	17,030,951
Lease receivables (Note 26)	9,180,955	12,900,835	9,180,955	12,900,835
	410,397,251	363,040,128	410,035,562	362,709,118
Financial liabilities at amortised cost				
Trade and other payables (Note 12)	88,908,016	82,597,699	88,899,867	82,592,068
Lease liabilities (Note 26)	19,874,689	28,779,717	19,874,689	28,779,717
	108,782,705	111,377,416	108,774,556	111,371,785

The carrying amounts of cash and cash equivalents, trade receivables (current), other receivables and trade and other payables, approximate their respective fair values due to the relatively short-term maturity of these financial instruments.

The carrying amount of long-term trade receivables approximates fair value as the interest rate approximates the market level at the end of the reporting period.

(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 is the risk of loss that may arise on outstanding financial instruments should a counterparty defaults on its obligations.

The Group's credit risk is primarily attributable to its trade and other receivables. For cash at bank, the Group minimises credit risk by dealing exclusively with high credit rating counterparties.

The Group's objective is to minimise losses incurred due to increased credit risk exposure. The Group trades only with recognised and creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis with the result that the Company's exposure to bad debts is not significant.

The Group considers the probability of default upon initial recognition of asset and whether there has been a significant increase in credit risk on an ongoing basis throughout each reporting period

The Group has determined the default event on a financial asset to be when the counterparty fails to make contractual payments, within 90 days when they fall due, which are derived based on the Company's historical information.

To assess whether there is a significant increase in credit risk, the Group compares the risk of a default occurring on the asset as at reporting date with the risk of default as at the date of initial recognition. The Group considers available reasonable and supportive forwarding-looking information which includes the following indicator:

- Actual or expected adverse changes in business, financial or economic conditions that are expected to cause a significant change to the debtor's ability to meet its obligation

Regardless of the analysis above, a significant increase in credit risk is presumed if a debtor is more than 30 days past due in making contractual payment or when debtor requests for deferment of contractual payments.

The Group determined that its financial assets are credit-impaired when:

- There is significant financial difficulty of the debtors
- A breach of contract, such as a default or past due event
- It is becoming probable that the debtor will enter bankruptcy or other financial reorganisation

Financial assets are written off when there is evidence indicating that the debtor is in severe financial difficulty and the debtor has no realistic prospect of recovery. Where receivables have been written off, the Group continues to engage enforcement activity to attempt to recover the receivable due. Where recoveries are made, these are recognised in profit or loss.

The following are credit risk management practices and quantitative and qualitative information about amounts arising from expected credit losses for each class of financial assets.

Trade receivables

As at the end of the reporting period, the Group has recorded an impairment loss allowance of $2,137,400 (2020: $937,400) on its trade receivables due from one of its debtors. The debtor has requested for an extended credit term and the amount is more than 150 days past due based on its agreed contractual repayment due date. Management has assessed the amount to be credit impaired after considering the debtor's financial position and the impact of Covid-19 to debtor's business operations.

For the remaining trade receivables, the Group has applied the simplified approach in SB-FRS 109 to measure the allowance of lifetime ECL. The Group determines the ECL by using a provision matrix, estimated based on historical credit loss experience based on the past due status of the debtors, adjusted and apportioned to reflect current conditions and estimates of future economic conditions. Based on the Group's assessment, there is no additional loss allowance provision made as at 31 March 2021.

Other receivables

The Group has credit policies and procedures in place to minimise and mitigate its credit risk exposure. The Group assessed the latest performance and financial position of the other counterparties, adjusted for the future outlook of the industry in which the counterparties operate in, and concluded that there has been no significant increase in the credit risk since initial recognition of the financial assets. Accordingly, the Group measured the impairment allowance using 12-month ECL and determine that the ECL is insignificant.

Excessive risk concentration

Except for receivables due from MND and other government agencies, there is no significant concentration of credit risk.

iii) Liquidity risk management

Liquidity risk is the risk that the Group and the Board will not be able to meet their financial obligations as and when they fall due.

The Group and the Board receive its funds from the Government of Singapore which are drawn down on a regular basis to meet its funding requirements. All excess cash from the Group's bank accounts are aggregated and centrally managed by the AGD on a daily basis.

Analysis of financial instruments by remaining contractual maturities

The table below summarises the maturity profile of the Group's and NParks' financial liabilities at the end of the reporting period based on contractual undiscounted repayment obligations.

	LESS THAN ONE YEAR	ONE TO FIVE YEARS	OVER FIVE YEARS	TOTAL
	$	$	$	$
GROUP				
2020/2021				
Financial liabilities				
Trade and other payables	88,907,256	–	–	88,907,256
Lease liabilities	4,299,176	15,513,815	1,910,240	21,723,231
Total undiscounted financial liabilities	93,206,432	15,513,815	1,910,240	110,630,487
2019/2020				
Financial liabilities				
Trade and other payables	82,597,699	–	–	82,597,699
Lease liabilities	4,768,523	21,901,701	5,566,580	32,236,804
Total undiscounted financial liabilities	87,366,222	21,901,701	5,566,580	114,834,503

	LESS THAN ONE YEAR	ONE TO FIVE YEARS	OVER FIVE YEARS	TOTAL
	$	$	$	$
NPARKS				
2020/2021				
Financial liabilities				
Trade and other payables	88,899,867	–	–	88,899,867
Lease liabilities	4,299,176	15,513,815	1,910,240	21,723,231
Total undiscounted financial liabilities	93,199,043	15,513,815	1,910,240	110,623,098
2019/2020				
Financial liabilities				
Trade and other payables	82,592,068	–	–	82,592,068
Lease liabilities	4,768,523	21,901,701	5,566,580	32,236,804
Total undiscounted financial liabilities	87,360,591	21,901,701	5,566,580	114,828,872

(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.

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, which are reimbursable in full:

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
MND		
Revenue collected on behalf	23,126,905	32,075,177
Development expenditure paid on behalf – Other state projects	89,842,264	128,004,465
Other Ministries and Statutory Boards		
Expenses paid on behalf	11,830,407	14,192,009
Garden City Fund		
Expenses paid on behalf	2,632,390	11,924,400
Gardens by the Bay		
Expenses paid on behalf	68,505	81,198

Compensation of key management personnel

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

Salaries and other short-term employee benefits	2,266,869	2,360,934
Post-employment benefits	77,001	85,536

6. Cash and cash equivalents

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Cash at bank	347,159	351,777	–	–
Deposits with AGD[(i)]	385,747,762	325,950,436	385,747,762	325,950,436
	386,094,921	326,302,213	385,747,762	325,950,436

(i) With effect from financial year 2009/2010, Statutory Boards 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 0.79% (2019/2020: 1.94%) per annum.

7. Trade receivables

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Not past due and not impaired	2,626,631	5,277,313	2,626,631	5,277,313
Past due but not impaired:	1,944,633	1,549,583	1,925,133	1,549,583
< 1 months	304,455	356,097	304,455	356,097
1 months to 4 months	395,531	56,666	376,031	56,666
> 4 months	1,244,647	1,136,820	1,244,647	1,136,820
Impaired receivables	2,137,400	937,400	2,137,400	937,400
Less: Allowance for impairment	(2,137,400)	(937,400)	(2,137,400)	(937,400)
Total	4,571,264	6,826,896	4,551,764	6,826,896
Represented by:				
Current portion	3,899,264	6,154,896	3,879,764	6,154,896
Non-current portion	672,000	672,000	672,000	672,000
Total	4,571,264	6,826,896	4,551,764	6,826,896

The credit period on rendering of services is 30 days (2019/2020: 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.

Expected credit losses

The movement in allowance for expected credit losses of trade receivables computed based on lifetime ECL are as follows:

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Movement in allowance accounts:		
At 1 April 2020	937,400	1,150,000
Charge for the year	1,200,000	–
Write-back	–	(212,600)
At 31 March 2021	2,137,400	937,400

8. Other receivables

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Other receivables				
– MND [(i)]	5,835,304	9,280,928	5,835,304	9,280,928
– Garden City Fund [(ii)]	2,047,455	3,660,639	2,047,455	3,660,639
– Gardens by the Bay [(ii)]	15,489	25,439	15,489	25,439
– Other receivables	1,439,157	726,427	1,444,377	747,444
Interest receivable	727,267	2,859,661	727,267	2,859,661
Deposits	485,439	457,090	485,189	456,840
	10,550,111	17,010,184	10,555,081	17,030,951

Notes

(i) Receivables from MND comprise direct development 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

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
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	
			2020/2021	2019/2020
			%	%
Singapore Garden City Pte. Ltd. [(a)]	Landscape planning, advisory services and business consulting services	Singapore	100	100

(a) Audited by KLP LLP.

10. Property, plant and equipment

GROUP AND NPARKS	LEASEHOLD LAND	BUILDING, STRUCTURES, CAPITAL AND OTHER IMPROVEMENTS	OFFICE EQUIPMENT, FURNITURE AND FITTINGS	MOTOR VEHICLES	LABORATORY AND GARDENING EQUIPMENT	CONSTRUCTION-IN-PROGRESS	TOTAL
	$	$	$	$	$	$	$
Cost							
At 1 April 2019	66,273,168	158,623,460	55,561,295	1,422,389	1,610,627	19,764,242	303,255,181
Transferred from AVA	3,813,209	16,049,323	1,980,162	115,036	441,523	82,525	22,481,778
Additions	–	939,876	1,846,969	113,129	132,714	40,555,490	43,588,178
Transfer	–	3,237,780	6,013,236	–	1,112,106	(10,363,122)	–
Disposals	–	(410,836)	(5,114,446)	(143,212)	(39,997)	–	(5,708,491)
At 31 March 2020 and 1 April 2020	70,086,377	178,439,603	60,287,216	1,507,342	3,256,973	50,039,135	363,616,646
Additions	–	923,427	744,163	200,330	79,532	14,022,059	15,969,511
Transfer	–	27,348,809	6,004,093	–	77,296	(33,430,198)	–
Disposals	–	(6,824,016)	(209,494)	(246,696)	(245,726)	–	(7,525,932)
At 31 March 2021	70,086,377	199,887,823	66,825,978	1,460,976	3,168,075	30,630,996	372,060,225
Accumulated depreciation							
At 1 April 2019	15,855,749	113,009,957	34,859,481	993,859	1,177,038	–	165,896,084
Depreciation	1,126,158	6,478,509	6,383,130	158,041	339,406	–	14,485,244
Disposals	–	(125,641)	(5,064,838)	(72,614)	(2,267)	–	(5,265,360)
At 31 March 2020 and 1 April 2020	16,981,907	119,362,825	36,177,773	1,079,286	1,514,177	–	175,115,968
Depreciation	1,126,158	6,838,578	6,297,478	147,288	374,575	–	14,784,077
Disposals	–	(6,813,487)	(172,889)	(215,155)	(237,046)	–	(7,438,577)
At 31 March 2021	18,108,065	119,387,916	42,302,362	1,011,419	1,651,706	–	182,461,468
Carrying amount							
At 31 March 2020	53,104,470	59,076,778	24,109,443	428,056	1,742,796	50,039,135	188,500,678
At 31 March 2021	51,978,312	80,499,907	24,523,616	449,557	1,516,369	30,630,996	189,598,757

11. Government grants received in advance (receivable)

GROUP AND NPARKS	OPERATING GRANTS (i)	CAPITAL GRANTS	DEVELOPMENT GRANTS (ii)	OTHER GRANTS (iii)	TOTAL
	$	$	$	$	$
At 1 April 2019	11,977,214	–	(3,245,358)	(166,343)	8,565,513
Grants received during the financial year	385,221,366	2,997,873	128,861,169	5,162,775	522,243,183
Grants receivable	–	–	(5,023,335)	(49,488)	(5,072,823)
Interest income earned	–	–	20,357	–	20,357
Transfer to deferred capital grants (Note 16)	(16,009,749)	(2,997,873)	(266,682)	–	(19,274,304)
Unutilised grants returned	(189,238)	–	–	(1,848)	(191,086)
Payment on behalf	–	–	(128,004,465)	–	(128,004,465)
Transfer to statement of comprehensive income	(353,373,730)	–	–	(5,758,914)	(359,132,644)
At 31 March 2020 and 1 April 2020	27,625,863	–	(7,658,314)	(813,818)	19,153,731
Grants received during the financial year	364,028,740	73,403	100,226,035	2,668,732	466,996,910
Interest income earned	–	–	27,828	–	27,828
Transfer to deferred capital grants (Note 16)	(6,538,003)	(73,403)	(399,709)	–	(7,011,115)
Unutilised grants returned	–	–	–	(88,779)	(88,779)
Payment on behalf	–	–	(89,842,264)	–	(89,842,264)
Transfer to statement of comprehensive income	(358,618,910)	–	–	(2,286,697)	(360,905,607)
At 31 March 2021	26,497,690	–	2,353,576	(520,562)	28,330,704

Notes

(i) Total operating grants received/receivable less transferred to deferred capital grants since establishment are $3,986,688,053 (2019/2020: $3,629,197,316).

(ii) Development grants received from MND for State projects running by NParks on behalf of MND.

(iii) Other grants comprise grants received from other government agencies.

12. Trade and other payables

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Trade payables	18,136,104	18,241,749	18,136,104	18,241,749
Other receivables				
– MND (i)	3,873,906	3,328,732	3,873,906	3,328,732
– Garden City Fund (ii)	26,139	1,831	26,139	1,831
– Others	23,315,485	20,015,051	23,315,485	20,015,051
GST payable	2,426,624	4,616,618	2,426,624	4,616,618
Rental and other deposits	8,578,420	6,669,956	8,578,420	6,669,956
Accrual expenses	34,977,962	34,340,380	34,969,813	34,334,749
	91,334,640	87,214,317	91,326,491	87,208,686
Less: GST payable	(2,426,624)	(4,616,618)	(2,426,624)	(4,616,618)
	88,908,016	82,597,699	88,899,867	82,592,068

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

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

13. Provision for pension costs

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
At 1 April	2,296,137	2,416,137
Provision for the year (Note 23)	140,165	–
Payments during the year	(641,324)	(120,000)
At 31 March	1,794,978	2,296,137
Represented by:		
Current portion	120,000	640,370
Non-current portion	1,674,978	1,655,767
	1,794,978	2,296,137

As at the end of the reporting period, there is no (2019/2020: 1) employee of NParks who is eligible under the pension scheme.

14. Deferred revenue

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Lease premium received in advance	965,278	1,048,611	965,278	1,048,611
Deferred rental income	672,000	2,352,000	672,000	2,352,000
Plan fees received in advance	1,024,725	873,277	1,024,725	873,277
Other income received in advance	162,314	114,819	142,814	114,819
	2,824,317	4,388,707	2,804,817	4,388,707
Represented by:				
Current portion	939,082	2,473,329	919,582	2,473,329
Non-current portion	1,885,235	1,915,378	1,885,235	1,915,378
	2,824,317	4,388,707	2,804,817	4,388,707

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	
	2020/2021	2019/2020
	$	$
At 1 April	150,009,241	121,182,419
Transfer from AVA	–	14,514,056
Amounts transferred from Government grants (Note 11)	7,011,115	19,274,304
Amounts transferred from Garden City Fund	62,116	7,701,772
	157,082,472	162,672,551
Less: Amortisation of deferred capital grants	(12,118,246)	(12,663,310)
At 31 March	144,964,226	150,009,241
Total capital grants received (excluding donations-in-kind transferred from Garden City Fund) and utilised since establishment	318,924,517	311,913,402

17. Share capital

	2020/2021	2019/2020	2020/2021	2019/2020
	Number of shares		$	$
Issued and fully paid up:				
At 1 April	22,030,064	6,436,238	22,030,064	6,436,238
Transferred from AVA [1]	–	9,539,511	–	9,539,511
Equity injection [2]	5,916,172	6,054,315	5,916,172	6,054,315
At the end of the year	27,946,236	22,030,064	27,946,236	22,030,064

(1) Relates to the shares issued to Minister for Finance in conjunction with the transfer of non-food functions from AVA to NParks on 1 April 2019.

(2) 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.

18. 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.

19. Other reserve

Other reserve represent the accumulated surplus transferred from AVA to NParks to on 1 April 2019 when AVA transferred its non-food functions to NParks. The Group has earmarked this reserve to fund future replacement of the property, plant and equipment that were transferred from AVA as at 1 April 2019. The amount utilised in the current financial year represents the depreciation charged on replacement assets of $7,693 that have been purchased as at the end of the reporting period.

20. Net assets of Garden City Fund

National Parks Board ("NParks") is the trustee of Garden City Fund ("GCF"). GCF is managed and administered by the Garden City Fund Management Committee, comprising staff from NParks and members of the public appointed by NParks, in accordance with the provisions of the Garden City Fund Trust Deed dated 10 March 2016 (the "Deed").

The GCF 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. There has been no contribution to the GCEF since establishment.

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

The objectives of GCF are exclusively to enhance the enjoyment of the Garden City, for amenities and special features at the national parks, nature reserves and green areas in Singapore and also for community activities and programmes that promote awareness of nature, art and culture, conservation, research and education and, through involving the citizens to enhance ownership of the Garden City, facilitating a sense of rootedness to the nation.

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).

GCF's accounts are prepared in accordance with Financial Reporting Standards in Singapore ("FRS").

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Income:		
Donations	5,827,441	14,754,968
Sales of publications/souvenirs/merchandise	59,585	68,748
Course/tour fees	6,742	95,381
Interest income	58,889	305,463
Other income	8,989	36,701
	5,961,646	15,261,261
Amounts disbursed for:		
Costs of charitable activities:		
Conservation projects	28,119	276,773
Enhancements of parks, gardens and facilities	1,919,473	12,047,689
Outreach, education and research programmes	1,864,566	1,949,535
Publication	76,677	51,292
Depreciation of property, plant and equipment	105,811	96,340
Loss on disposal of plant and equipment	15,000	3,100
Administrative costs	1,890	8,376
	4,011,536	14,433,105
Surplus for the year	1,950,110	828,156
Accumulated fund at 1 April	10,985,124	10,156,968
Accumulated fund at 31 March	12,935,234	10,985,124
Represented by:		
Current assets		
Cash and cash equivalents	18,746,892	18,793,455
Other receivables and prepayments	1,390,479	2,263,582
	20,137,371	21,057,037
Non-current asset		
Plant and equipment	1,480,474	864,677
Current liabilities		
Trade payables	47,093	20,055
Other payables	2,211,501	3,991,949
Deferred donations	6,424,017	6,924,586
	8,682,611	10,936,590
Net assets	12,935,234	10,985,124

21. Net assets of National Productivity Fund

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

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Grants received	188,054	558,440
Less: Expenditure	(348,165)	(506,796)
Staff related cost	(259,310)	(260,109)
General administration	–	(219,316)
Grant disbursement	(88,855)	(27,371)
(Deficit)/surplus for the year	(160,111)	51,644
Accumulated fund at 1 April	161,642	109,998
Accumulated fund at 31 March	1,531	161,642
Represented by:		
Cash and bank balances	160,590	214,639
Accruals	(159,059)	(52,997)
Net assets	1,531	161,642

22. Income

	GROUP		NPARKS	
	2020/2021	2019/2020	2020/2021	2019/2020
	$	$	$	$
Operating income	19,054,542	28,540,964	19,051,090	28,540,964
Liquidated damages	498,275	310,964	498,275	310,964
Barbeque permit fees	113,552	387,574	113,552	387,574
Park usage fees	3,521	142,587	3,521	142,587
Consultancy fees	18,000	97,718	–	–
Tour fees	1,895	53,970	1,895	53,970
Events income	–	27,221	–	27,221
Merchandise	31,378	83,946	31,378	83,946
Publication and plant sales	168,271	194,052	168,271	194,052
Gain on lease modifications	2,430,221	151,301	2,430,221	151,301
Others	324,655	1,246,812	329,534	1,250,061
Miscellaneous income	3,589,768	2,696,145	3,576,647	2,601,676
	22,644,310	31,237,109	22,627,737	31,142,640
Timing of transfer of goods or services (excluding interest income):				
- At a point in time	12,047,430	15,111,600	12,034,309	15,017,131
- Overtime	6,839,424	11,213,008	6,839,424	11,213,008
	18,886,854	26,324,608	18,873,733	26,230,139

23. Staff costs

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Wages and salaries	109,478,798	109,132,177
Contributions to defined contribution plans	15,620,298	16,178,169
Pension costs (Note 13)	140,165	–
Other staff benefits	1,394,721	1,166,935
	126,633,982	126,477,281

24. Deficit from operations

The following item has been included in arriving at deficit from operations:

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Loss on disposal of property, plant and equipment	37,259	299,295
Impairment loss/(write-back) of trade receivables	1,200,000	(212,600)

25. Funding for government projects

During the financial year ended 31 March 2021, $5,044,029 (2019/2020: $10,739,984) was incurred to fund the capital expenditure for government projects, namely, Redevelopment of Park Connector Network, SBG Gallop Road Extension and Jacob Ballas Children Gardens Extension. (2019/2020: Jacob Ballas Children Gardens Extension, Redevelopment of Park Connector Network and SBG Gallop Road Extension).

As these projects were funded using NParks' accumulated surplus, they are considered distribution to owners. Accordingly, the amounts are recognised directly in the statement of changes in equity.

26. Leases

As lessee

The Group has lease contracts for leasehold land, buildings, office premises and equipment. There are lease contracts that include extension options which are further discussed below.

The Group has certain leases with lease terms of 12 months or less and leases of low value. The Group applies the 'short-term lease' and 'lease of low-value assets' recognition exemptions for these leases.

(a) Carrying amounts of right-of-use assets

GROUP AND NPARKS	LEASEHOLD LAND AND BUILDINGS	OFFICE PREMISES	EQUIPMENT	TOTAL
	$	$	$	$
At 1 April 2020	10,911,715	571,196	–	11,482,91
Additions	–	6,139,731	38,158	6,177,889
Depreciation expense	(1,479,759)	(567,985)	(11,129)	(2,058,873)
As at 31 March 2020	9,431,956	6,142,942	27,029	15,601,927
Additions	3,087,197	383,827	–	3,471,024
Lease modification	(3,765,828)	–	–	(3,765,828)
Depreciation expense	(2,039,526)	(933,792)	(19,079)	(2,992,397)
At 31 March 2021	6,713,799	5,592,977	7,950	12,314,726

(b) Lease liabilities

The carrying amounts of lease liabilities and the movements during the year are disclosed as follow:

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
At 1 April	28,779,717	26,189,829
Additions	383,828	6,177,889
Lease modification	(5,323,177)	–
Accretion of interest	841,591	841,983
Payments	(4,807,270)	(4,429,984)
At 31 March	19,874,689	28,779,717
Current	3,756,851	3,918,766
Non-current	16,117,838	24,860,951
	19,874,689	28,779,717

The maturity analysis of lease liabilities is disclosed in Note 4.

(c) Amounts recognised in profit or loss

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
Depreciation of right-of-use assets	2,992,397	2,058,873
Gain on lease modifications	(2,430,221)	(151,301)
Interest expense on lease liabilities	841,591	841,983
Lease expenses not capitalised in lease liabilities		
- Expense relating to short-term leases	1,801,624	1,735,131
- Expenses relating to leases of low-value assets	1,368,397	1,045,773
Total lease expense	3,170,021	2,780,904
Total amount recognised in profit or loss	4,573,788	5,530,459

(d) Total cash outflow

During the current financial year, the Group has total cash outflow for leases of $7,977,291 (2019/2020: $7,210,888).

(e) Extension options

The group has lease contracts that include extension options. These options are negotiated by management to provide flexibility in managing the leased-asset portfolio and align with the Group's business needs.

As intermediate lessor

The Group's has entered into subleases on one of its premises. The lease terms of these subleases constitute a major part of tenure of the head lease and accordingly, these subleases are classified as finance leases. The net investment in the sub-lease is recognised under "Lease receivables".

The following table shows the maturity analysis of the undiscounted lease payments to be received:

	GROUP AND NPARKS	
	2020/2021	2019/2020
	$	$
At 1 April	12,900,835	14,646,844
Lease modifications	(2,214,323)	–
Accretion of interest	375,132	437,416
Receipts	(1,880,689)	(2,183,425)
At 31 March	9,180,955	12,900,835
Within one year	1,772,260	1,956,608
After one year but not more than five years	7,072,577	10,917,125
More than five years	1,178,763	1,455,617
Total undiscounted finance lease receivables	10,023,600	14,329,350
Unearned finance income	(842,645)	(1,428,515)
Total finance lease receivables at 31 March	9,180,955	12,900,835
Represented as:		
Current	1,505,204	1,568,648
Non-current	7,675,751	11,332,187
	9,180,955	12,900,835
The following are the amounts recognised in profit or loss:		
Interest income on lease receivables	375,132	437,416

27. Commitments

CAPITAL COMMITMENTS	GROUP AND NPARKS 2020/2021 $	2019/2020 $
Contracted but not provided for	230,394,332	283,080,546
Less: Development expenditure on behalf of government	(227,547,041)	(270,506,333)
	2,847,291	12,574,213
Authorised but not contracted for	596,382,647	365,454,204
Less: Development expenditure on behalf of government	(561,708,400)	(339,452,593)
	34,674,247	26,001,611
	37,521,538	38,575,824

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 Jurong Lake Gardens, rail corridor, parks developments and park connector network. Amount authorised but not contracted for comprise mainly work relating to parks developments and park connector network.

28. Authorisation of financial statements for issue

The financial statements for the financial year ended 31 March 2021 were authorised for issue by the members of the Group on 14 July 2021.

FRONT COVER
The Bukit Timah Nature Reserve contains lowland and coastal hill dipterocarp forest, and is home to one of the richest and most diverse ecological systems in Singapore.

INTRODUCTION
Children can play in an environment immersed in greenery at Coastal PlayGrove in East Coast Park. Nature Playgardens such as this one enable children to develop a sense of adventure and discovery.

CHAPTER DIVIDERS
Page 12 – Nature For All
Trumpet Trees (*Tabebuia rosea*) with crowns of pink or white flowers along the Ulu Pandan Park Connector provide respite for busy residents and offer them opportunities to get closer to nature.

Page 22 – Connecting With Nature
Visitors to Lakeside Garden at Jurong Lake Gardens can admire the flora and fauna found on Alstonia Island, a restored freshwater swamp habitat designed to reflect the natural history of the land.

Page 34 – Nurtured by Nature
Understanding animal ethology provides crucial insights into a pet's emotional and physical needs. This ensures community animals are well taken care of and can better co-exist with us in our City in Nature.

We thank staff and partners of NParks who kindly contributed photos to this Annual Report

Ang Mo Kio Town Council, Page 15:
Photo of Prime Minister Lee Hsien Loong

Lee Jia Hwa, Page 16:
Photo of Sandpaper Vine (*Petrea volubilis*)

David Li, Page 25:
Photo of Gadwalls (*Anas strepera*)

Matti Asser Niissalo, Page 26:
Photo of *Nervilia singaporensis*

Chew Yin Xin, Page 27:
Photo of Brown-throated Sunbird (*Anthreptes malacensis*)

Goh Pei Shuan, Page 27:
Photo of Common Amberwing (*Brachythemis contaminata*)

Wendy Choo, Page 27:
Photo of Common Mormon (*Papilio polytes romulus*)

Max Khoo, Page 30:
Photo of Long-tailed Macaque (*Macaca fascicularis*)
and Page 38:
Photo of Sunda Pangolin (*Manis javanica*)

Kathleen Yap, Page 30:
Photo of Wild Boar (*Sus scrofa*)

Sherrie Ooi, Page 32:
Photo of pet dog adopted under Project ADORE

Jonathan Tan, Page 36:
Photo of intertidal zone at Kusu Island

Rachel Tan, Page 41:
Photo of tree canopies in Central Catchment Nature Reserve

Robin Ngiam, Page 49:
Photo of Yellow Featherlegs damselfly (*Copera marginipes*)

All photographs were taken before the Circuit Breaker or in accordance with prevailing safe management measures.

NATIONAL PARKS *NParks' Publication*

NATIONAL PARKS BOARD
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