

ECOFRIEND  
AWARDS

PORTFOLIO OF RECIPIENTS

2017



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# INTRODUCTION



The **National Environment Agency (NEA)** is pleased to note that a growing number of individuals – such as school teachers, students, youth and community volunteers, as well as those from the non-government, private, people and public sector organisations – have contributed selflessly to our Clean & Green environment.

The EcoFriend Awards was developed by NEA to recognise and acknowledge the efforts of these individuals.

There are five categories in the EcoFriend Awards – *Private Sector, Public Sector, Non-Government Organisations and Grassroots Volunteers, Educational Institutions, and Youth and Students.*

The EcoFriend Awards 2017 recognises ten outstanding individuals for their environmental achievements.

For more information, please visit the EcoFriend website at [www.nea.gov.sg/ecofriend](http://www.nea.gov.sg/ecofriend).

# PRIVATE SECTOR

## CATEGORY

As the Chief Executive Officer of Systems on Silicon Manufacturing Company (SSMC) Pte. Ltd., Mr Jagadish recognised the importance of setting up an environmental committee to raise awareness of environmental issues among his staff. He also partnered with schools to broaden SSMC's environmental efforts in the community through various outreach programmes.

### Achievements

#### Raising Green Standards within the Organisation

Since 2006, Mr Jagadish has been implementing environmental measures in SSMC such as the installation of systems to reduce greenhouse gas emissions, opting for non-hazardous alternatives and digitising hardcopy forms. He adopted the **Electronic Industry Citizenship Coalition Code of Conduct** since 2011, which established social, environmental and ethical standards in the electronics industry supply chain, and deployed the framework to SSMC's key stakeholders.

Mr Jagadish replaced all light fittings in SSMC's premises with energy efficient ones. Eco-friendly facility systems such as chillers, pumps, heaters, air conditioners and clean room air pressure systems were upgraded and optimised. These initiatives, along with monthly energy consumption monitoring in the factories, helped save more than 20 gigawatts of energy between 2006 and 2016.

Mr Jagadish has cultivated a sustainability culture in SSMC. In 2013, staff from the gardening interest group developed an **Eco Garden**, where in-house fermented organic waste was used as pesticide and fertiliser to grow plants.

#### Walking the Green Talk

On the corporate social responsibility front, SSMC has adopted Park View Primary School, Siglap Secondary School, and Meridian Junior College since 2011 to engage students on environmental activities. From 2015 to 2017, SSMC recruited 289 litter-free ambassadors under the **Hot Spot to Bright Spot** programme, where they collected 369kg of litter from over 10 litter-picking sessions.

Mr Jagadish has continued to participate in beach clean-ups and environmental competitions with his staff and the community.

“

We should all strive to demonstrate strong commitment to social responsibility by transforming the world into a better place, improving the lives we touch and preserving a clean and green environment for our future generations.

”



**Mr Jagadish CV**  
Chief Executive Officer,  
Systems on Silicon Manufacturing  
Company Pte. Ltd.

# PUBLIC SECTOR

## CATEGORY

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Mr Tan's environmental passion has been the driving force behind many of the actions he took since 2013 to raise awareness on environmental issues among his colleagues and students in ITE College Central (ITECC), including leading eco tours in the school and designing learning activities for special needs children. This has been over and above his appointment in the Environmental Sustainability Initiatives Committee.

### Achievements

#### Sharing of Best Practices

Some of Mr Tan's recent achievements included hosting over 600 overseas delegates, exchange students and staff from government agencies on the **Eco Tour at ITECC**. Participants visited the eco-friendly features found in the school campus, such as the Green Wall, Eco Pond, Community Garden and Recycling Station.

#### Instilling Green Habits in the Young

Since 2015, Mr Tan has been collaborating with Chao Yang Primary School to add value to their science curriculum, where students could learn about global warming and the 3Rs (Reduce, Reuse and Recycle). With the help of ITE staff and students, over 180 Primary Six students have participated in the programme, including attending hands-on waste-to-craft sessions and terrarium workshops.

#### Grooming Change Agents for Sustainability

Mr Tan co-organised the **National Climate Change Youth Forum** with the National Climate Change Secretariat and National Youth Achievement Award Council in 2016, which saw a turnout of 200 students from ITE, polytechnics and universities. He provided training to the ITE student facilitators and emcee for the event.

Mr Tan has been an active member of the **Youth Environmental Envoy Programme** working group that planned programmes to promote environmental leadership among students from the three ITE colleges. For the past three years, ITECC took the lead in conducting an environmental workshop, organising an overseas trip to Thailand and coordinating an eco-camp at Singapore Zoo, which benefitted almost 270 students.

“

*In this world of connectedness, it is important for educational institutions and youths to engage different partners and the community to work together, share knowledge and spur one another on, in the name of environmental conservation.*

”

**Mr Tan Hong Ming**  
Section Head,  
Electronics Engineering,  
ITE College Central



# PUBLIC SECTOR

## CATEGORY

A lecturer with 12 years of teaching experience, Ms Loh understands the importance of influencing the younger generation to tackle environmental challenges. She has initiated a series of clean-up operations in ITE College East (ITECE) and groomed students to become litter-free ambassadors. Her dedication has led to collaborations with other educational institutions and public organisations to bring about greater collective action for the environment.

### Achievements

#### Developing Environmental Awareness Inspiring the Future Generation

In 2009, Ms Loh initiated the environmental club to educate students on how to care for the environment. She led the club members in conducting an environmental audit of the school by liaising with estate services and the relevant departments, which led the school to clinch the Lotus Award in the SEC-StarHub School Green Awards in 2015.

Ms Loh spearheaded the **Mass Classroom Clean Up** initiative on Youth for the Environment Day in 2016 to encourage students to take ownership of their immediate surroundings. Two college-wide classroom cleaning activities were conducted, involving 2,000 students from across the four academic schools in ITECE. In addition, Ms Loh has been coordinating the **Bright Spots Initiative**, a college-wide movement to maintain cleanliness of common spaces within the school. Since its commencement, about 200kg of litter has been collected.

Since 2015, Ms Loh has been partnering with 25 kindergartens in the East for Tetra Pak's **Little Green Dots** programme. After undergoing training by Tetra Pak staff, her environmental club members would teach the kindergarten children on the process of collecting and recycling Used Beverage Cartons (UBCs). In 2014, the school was the Champion in the Tertiary category of the UBCs collection contest organised by Tetra Pak.

Ms Loh has continued to engage schools, ranging from kindergartens to secondary schools on various environmental activities, including the **Waste-to-Craft Creativity Competition** organised by ITE in partnership with South East CDC. She has been playing a key role in organising the competition, which aims to engage youths in understanding global environmental challenges and promote environmental sustainability through the creative use of waste materials.

“

*I want to encourage everyone to adopt a green mindset as I believe that when we make a collective effort, we will make a huge difference for the next generation!*

”

Ms Karen Loh Qi Zhuang

Lecturer,  
Electronics Engineering,  
ITE College East



# NON-GOVERNMENT ORGANISATIONS & GRASSROOTS VOLUNTEERS

## CATEGORY

Ms Kia co-founded Save That Pen to give unwanted and used pens a new lease of life. What started out as a campus-wide initiative in the National University of Singapore (NUS) became an extensive community involvement project, with participation from more than 50 educational institutions and community groups island-wide.

### Achievements

#### Creating Avenues for Used Pens

**Save That Pen** started in 2010 when Ms Kia realised that most pens disposed of could still be reused by purchasing refills. With the support of the University Scholars Programme (USP) community, the first pen collection bin was set up in the USP club room.

Ms Kia sought sponsorship from various organisations such as Zebra Pen Singapore Pte. Ltd., Pilot Pen Singapore, and NUS Co-operative to provide the pen refills. Young NTUC came on board in 2011 and provided seed funding to manufacture collection bins which were more durable. Today, there are 13 collection bins located throughout Singapore, where the public can donate their unwanted pens. These locations include Nanyang Technological University and Singapore Management University.

To date, over 85,000 used or unwanted pens have been collected. Students from over 50 primary, secondary and tertiary institutions, as well as volunteers from all walks of life are involved in the sorting, refilling and redistributing of the pens.

Approximately 10,000 pens have been redistributed to underprivileged students in Singapore, Cambodia, Indonesia, Laos, Nepal, Philippines and Vietnam.

#### Pushing the Sustainability Agenda for Pens

Pens that could not be refilled were upcycled into pen lamps and stationery holders. Ms Kia has been in talks with Malaysian and Indonesian recycling plants for potential collaboration on recycling used pens that could not be refilled.

To promote waste reduction, Ms Kia has published a series of blog posts on this topic, which included her reflections from visiting the Materials Recovery Facility, Senoko Waste-to-Energy Plant and Semakau Landfill. Titled 'Behind the Bins', it followed the pre- and post-journey of a pen, as well as touched on the challenges of recycling in Singapore.

“

*No one wants to be told that we are part of the problem. We need experiences that let us come to that conclusion ourselves. We all contribute to the problem of a disposable culture. We have the power to ask: Why should things be the way they are today? Surely we can do better?*

”

**Ms Kia Jie Hui**  
Co-Founder,  
Save That Pen



# NON-GOVERNMENT ORGANISATIONS & GRASSROOTS VOLUNTEERS

## CATEGORY

Mr Ng believes in creating a cleaner and greener environment for everyone to enjoy. He has been championing green initiatives in Nee Soon South related to cleanliness, recycling, anti-littering, smoke-free environment, dengue prevention and water conservation.

### Achievements

#### Maintaining a Clean Environment for All

Fondly known as Mr HABIT, Mr Ng has been championing the **HABIT @ Nee Soon South ('Hold on And Bin IT, make it a H.A.B.IT!')** anti-littering programme since its inception in 2012. As Chairman of the Clean & Green Committee, Mr Ng has been collaborating with government agencies and grassroots organisations to organise litter-picking activities involving all eight Nee Soon South Residents' Committees and three Neighbourhood Committees. An average of 200 people participated in their activities each month. Due to the regular involvement of these partners, the number of litter-picking participants increased by 300% from 50 to 200 in 2012. The programme received the Prime Minister Community Initiatives Award in 2014.

Mr Ng has been working with stakeholders such as religious organisations, business associations, corporations and schools to raise awareness of environmental issues. He collaborated with Khoo Teck Puat Hospital

for Earth Day 2017, where the **'Say No to Plastic Bag'** campaign was launched. Under this campaign, the pharmacy has been providing reusable bags to promote the 4Rs (Reduce, Reuse, Recycle and Refuse).

#### Community-led Green Initiatives

To encourage pet owners to be more considerate to other park users as well as to curb dog litter, Mr Ng initiated the **Dog-Poo Bag Station Project** in 2015. Residents were encouraged to deposit extra litter bags at these stations for use by dog owners. Currently, there are 36 dog-poo bag stations installed along park connectors and parks in Nee Soon South.

Mr Ng has also been promoting smoke-free zones in his constituency. He has rolled out 42 Designated Smoking Points (DSPs) across the 147 blocks in Nee Soon South, and plans to increase the number of DSPs to 50 by end 2017 to minimise second-hand smoke in public spaces.

“

We have only one Earth. If we don't take care of it, who will?

”



**Mr Ng Hak Hai, PBM**  
*Chairman,*  
Nee Soon South Clean and  
Green Committee



# EDUCATIONAL INSTITUTIONS

## CATEGORY

Ms Quek recognises the importance of starting environmental education at an early age. She has introduced various environmental programmes for children aged 3 to 6 years old in the preschool, focusing on topics such as plastic and food waste reduction, and keeping our environment clean. She has also initiated collaborations with the wider community to supplement classroom activities and introduced the children to activities beyond the school.

### Achievements

#### Supplementing Existing Curriculum

In 2012, Ms Quek introduced a **‘Project Healthy and Happy Me’** class, across all levels. Each week, Ms Quek and her teaching staff utilise resource materials from various public agencies to educate pre-schoolers on topics such as personal hygiene, pollution, energy efficiency, litter-free, and 4Rs (Reduce, Reuse, Recycle and Refuse).

To supplement in-class learning, Ms Quek has been collaborating with Tetra Pak on the **Little Green Dots** programme. Under the programme, students were taught how to utilise Used Beverage Cartons (UBCs) for planting and to recycle the rest. About 46kg of UBCs have thus far been collected for reuse or recycling. In addition, Ms Quek has been collaborating with Green-Scape Services to train the teachers on how to plant and build terrariums using recycled containers.

#### Building Green Habits from Within

Ms Quek has implemented green guidelines for the procurement of school materials. Teachers were encouraged to buy non-toxic stationery, refillable markers, and cleaning products certified under the Singapore Green Labelling Scheme.

To reinforce environmental messages to staff and students, educational posters were put up in the school grounds. In every classroom, a recyclables collection point was set up where parent volunteers contributed pre-loved items such as books, uniforms, clothes and toys.

#### Enhancing Environmental Education through Joint Efforts

Ms Quek has established close relationships with neighbouring schools to promote environmental awareness to the young. For example, her students have been participating in joint litter-picking exercises with students from Unity Primary School at Pang Sua Canal since 2011.

“

*In order for us to enjoy the environment, we should play a part to preserve it.*

”



**Ms Ivy Quek Chew Buay**  
*Principal,*  
PCF Sparkletots Preschool  
@ Limbang Block 543 (KN)

# EDUCATIONAL INSTITUTIONS

## CATEGORY

For the past 10 years, Mr Heng has been incorporating environmental education into the school's curriculum to inculcate in students the importance of having a pro-environment mindset. He developed programmes and forums to inspire the youths to care for the environment, and sought out partners to extend learning opportunities beyond the classrooms.

### Achievements

#### Incorporating Environmental Topics into the Curriculum

In 2005, Mr Heng established an environment club and in 2009, he introduced Environment Ambassadors in every class to drive green activities in the school.

Mr Heng introduced an environmental module in the school's curriculum in 2006, and in 2013, he worked with the Singapore Science Centre to incorporate the module into the school's Applied Learning Programme – Clean Energy and Environmental Technology.

In addition, he developed a **4P (Promote, Participate, Propagate, emPower) framework** for the **Junior Outstanding Leaders in Energy for Sustainability Programme** in 2016, a leadership development programme with scholarship opportunities. To date, 11 students have been offered scholarships under this programme.

#### Building a Greener School

Since 2008, Mr Heng has helped convert the school's environment into one which espouses green energy and environmental education. His efforts included installing an **eco-garden, environment gallery** and **science learning walls**, amongst other green features.

In 2009, he introduced a **Bukit View Secondary School (BVSS) Environmental Policy Statement** to guide his fellow colleagues in environmental education and sustainable practices. This helped BVSS to reduce electricity consumption from 824,667 kWh/year in 2013 to 770,222 kWh/year in 2016.

#### Creating and Maintaining Partnerships

Mr Heng has been working with corporate organisations since 2006 to enhance the students' educational experience. These efforts included setting up a weather station to supplement the students' **Science, Technology, Engineering, and Mathematics (STEM) Education** and also building a **STEM Centre** in BVSS to display the latest sustainable technologies.

“

*When we educate our students to be more mindful of our environment, we are giving them a sustainable future.*

”

**Mr Heng Chong Yong**  
*HOD, Partnership,*  
Bukit View Secondary School



# YOUTH & STUDENTS

## CATEGORY

Ms Chen developed novel initiatives that promoted environmental awareness among the National University of Singapore (NUS) community. From sustainable takeaways to clothes recycling, Ms Chen's green efforts on campus gained traction and created many collaborative partnerships among her fellow students.

### Achievements

#### Spearheading Campus-wide Initiatives

In 2016, Ms Chen co-conceptualised **Bento Bash**, a lunchbox rental system. About 300 lunchboxes were rented in three days during the launch. This reduced the use of disposable takeaway boxes by 50%, further contributing to the **Green Canteens Campaign** that saw 5,000 disposable cups and over 20,000 disposable boxes saved in the same year.

Spurred by the positive response, Ms Chen worked with a team of Mechanical Engineering students to create a machine that automated the rental and return of lunchboxes. The **Bento Bash 2.0** trial recorded a total of 87 rentals over seven meal sessions served in the campus canteens.

#### Reinforcing Collective Responsibility

Ms Chen has extended the **NUS Green Bazaar**, part of the **Green Wardrobes Campaign**, to the South West district community in 2017. This programme allowed residents to swap items that they no longer needed. Over 300 second-hand items such as old clothes, textbooks and toys have thus far been donated.

#### Going Beyond Borders

Under the **NUS Study Trips for Engagement and EnRichment (STEER)** programme, Ms Chen together with team-mates from the Tembusu Wildlife Association interest group, planned the itinerary for their visit to different ecotourism groups and government ministries in Indonesia. They produced a 20-minute documentary, titled 'The Conservation Conversation', which won the Gold Award in the Non-Media Students Category at the National Youth Film Awards 2017.

“

*Environmental conservation is a cumulative effort. If you are thinking of doing something for the environment, don't wait, you should act right away. There are many resources and like-minded people you can work with to make it happen.*

”

**Ms Chen Lin**

*Vice-President,  
NUS Students Against Violation  
of the Earth*



# YOUTH & STUDENTS

## CATEGORY

Mr Tan believes in equipping youths with the necessary skills and knowledge to contribute meaningfully to the environment. As the President of I'dECO, he has initiated environmental action and leadership workshops for junior colleges and polytechnic students, and conceptualised a sustainability blueprint to recommend changes to different aspects of the school policy in Yale-NUS College. As the founding Chairman of the Singapore Sustainable Solutions Network (SSN), he also brings together environmental stakeholders in Singapore to discuss sustainability solutions.

### Achievements

#### Empowering Youth Leaders

Mr Tan co-created the **Singapore Environment Action and Leadership (SEAL) Workshop**, which entailed a three-prong approach for environmental education and was the first of its kind in Singapore. During the workshop, participants learnt theories related to environmental issues, visited sustainability sites and interacted with industry experts, after which they developed concrete project proposals to improve the sustainability scene in Singapore. Since 2016, three runs have been conducted, with a total of 80 participants trained.

In creating SEAL, Mr Tan developed the website, designed the curriculum and liaised with environmental organisations for learning journeys. He also coached the new organising team to run future iterations of the programme.

#### Promoting a Sustainable Culture

In 2015, Mr Tan and his team presented the Singapore **Sustainable Solutions Network (SSN)** proposal at the International Alliance of Research Universities' (IARU) Global University Climate Forum in Paris. The event, which saw a lively exchange of ideas with over 70 students from 30 other international universities, helped launch the SSN.

SSN has served as a platform for different environmental stakeholders in Singapore to connect through networking events, conferences, and the SSN online portal. Mr Tan led the team that worked on the different portal features, such as Green Funding, Green Database, Green Calendar, Green Profiles, Green Pitches and Green Visions.

In 2016, he co-organised the inaugural **SSN Conference** that attracted representatives from over 150 organisations including academia, government, non-government organisations and corporations. Activities were conducted to promote collaboration across stakeholders and to generate discussions on environmental issues and challenges.

“  
The most meaningful interventions for environmental protection come from a strong theoretical understanding of the issues at hand. Real-world initiatives developed from applied environmental research will bring us towards a cleaner and greener Singapore.”

”

**Mr Tan Weiliang**  
President,  
I'dECO: Yale-NUS  
Sustainability Movement  
Chairman,  
Sustainable Solutions Network



# YOUTH & STUDENTS

## CATEGORY

It is never too young to make a difference. Ms Song is a case in point, as demonstrated through the various environmental and outreach projects she has been involved in. She is the driving force behind the 'Refuse Plastic' movement implemented in her school to reduce plastic waste.

### Achievements

#### Promoting Green Actions among Schoolmates

Ms Song made the 3Rs (Reduce, Reuse and Recycle) an integral part of school life by introducing a recycling corner for used single-sided paper in classrooms. In her first year in school, she designed a recycling bin for collecting old uniforms to help students from low-income families.

Ms Song led students to make pencil holders from toilet paper rolls and photo frames out of cardboard as gifts for Teacher's Day appreciation. She also encouraged her schoolmates to buy pen refills instead of new pens. As part of the school's Green Wave Project, Ms Song collaborated with Fullmark Pte. Ltd. to collect empty correction tapes from her schoolmates in exchange for new ones biannually.

To reduce plastic waste, she led the '**Refuse Plastic**' Movement, an initiative to reduce the use of straws and plastic disposables in school. Besides conducting a school assembly talk to promote her campaign, she also obtained 100% buy-in from all the canteen vendors to stop using straws

and plastic disposables. After a month of implementation, 70% of the vendors had reported a reduction in operating costs and none of their businesses were adversely affected. The students have cut back on their takeaways and teachers have continued using their own lunchboxes. Plans for students to bring their own reusable containers are underway.

#### Joining Hands with the Community

In 2016, Ms Song involved both staff and parents in the school's annual **Flea Mart** where pre-loved items were given away for free to promote 3R habits and to contribute to a Zero Waste Singapore. In the same year, Ms Song facilitated the collection of old clothes from residents in the neighbouring estates for donation to Mercy Relief. So far, more than 3,000 pieces of clothing have been donated. She went the extra mile to promote upcycling ideas by conducting workshops for the public at community events such as the Clean and Green Singapore Carnival, and Eco Fiesta.

“

*Everyone has a responsibility towards our environment. If you look around us, there are always opportunities to save the environment in our daily lives.*

”



**Ms Clarissa Song Jia Xi**  
Vice-President, Green Club,  
Anderson Secondary School

# SPECIAL THANKS

**Special thanks to the following partners for their invaluable support of the EcoFriend Awards 2017:**

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## **Professor Leo Tan (Chair)**

Director (Special Projects), Faculty of Science,  
National University of Singapore

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## **Mr Puvan Ariaratnam**

Director, Character & Citizenship Education Branch, Ministry of Education  
Chairperson, Schools Sub-committee, Public Hygiene Council

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## **Mr Eu Pui Sun**

Senior Vice President (CSR & Projects), Senoko Energy Supply Pte Ltd

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## **Mr Edward Liu, PBM, MBA, FMIS**

Group Managing Director, Conference and Exhibition Management Services  
Chairman, Queenstown ABC Taskforce

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## **Ms Isabella Loh, PBM, FSEng, FCMI**

Chairman, Singapore Environment Council

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## **Mr James Soh, PBM, MBE**

Executive Director, National Youth Achievement Award Council

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