

API RE

JUL-SEP 2015

NATIONAL
DAY *Special*

CELEBRATING SINGAPORE'S
GOLDEN JUBILEE

Win!
\$20 worth of
CapitaVouchers

HONOURING
EARTH DAY
AROUND THE WORLD

SG
50

*Pride
and joy*

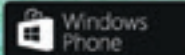
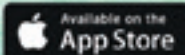
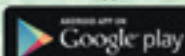
Singer Farisha Ishak unleashes her patriotic spirit at the revitalised Sungei Tampines and Sungei Api Api

PURE *enjoyment*

An easy, entertaining and informative read, Singapore's first free street magazine on water gets people interested in water issues with lifestyle content on a variety of topics.



Download App from:



PURE is available at selected MRT stations, F&B establishments, schools, libraries, PA Water Venture centres and various outlets offering lifestyle services. For advertising enquiries, please contact Michele Kho at michelek@mediacorp.com.sg or 63575075.



- 2 MAILBAG** Readers share what they think about **PURE**
- 3 BUZZ** An SG50 play explores life as it was in PUB's staff quarters back in the day
- 4 COVER STORY** Spanking new but still familiar — the makeover of Sungei Tampines and Sungei Api
- 8 UPFRONT** Singer Farisha Ishak on being uniquely Singaporean
- 10 NOW TRENDING** Instagrammers pay homage to H₂O
- 12 FACT ATTACK** Water-related facts to quench your thirst for knowledge

SG50 SPECIAL

- 14 ONCE UPON A TIME** The transformative journey of Singapore's rivers and reservoirs
- 16 WHERE OUR HEART IS** Mapping Singaporeans' favourite water spots
- 19 RED, WHITE AND GREEN** Eco-products perfect for SG50 celebrations

- 20 MARCHING ON** A PUB staff member reminisces about his NDP experience
- 22 GEEK OUT** Your water footprint is larger than you think
- 24 YOUTH BEAT** Water scientists in the making
- 26 WATER FOOTPRINTS** What it takes to be a 'Green Nobel' awardee
- 28 GLOBETROTTING** Earth Day celebrations around the world
- 30 MY SAY** **PURE** chats with Miss Earth Singapore (Water)
- 31 QUIZ** Read, take part and win!
- 32 THINKING ALOUD** Wishes for Singapore's future state of water



PURE clinched the APEX 2015 Grand Award in the One-of-a-kind Green Publications category!

ON THE COVER

Photography: Ealbert Ho **Art Direction:** Patricia Fong **Feature:** Farisha Ishak
On Farisha: jacket & necklace, New look. Top & skirt, MDS. Pumps, Charles & Keith. Bangles, w.e. **Styling:** Chin **Makeup & hair:** Melissa Yeo

advisor
George Madhavan

editors
Nawwar Syahirah, Abby Teo

publishing consultant
MediaCorp Pte Ltd

supervising senior editor
Agatha Koh Brazil

senior editor
Ronald Rajan

assistant editor
Chia Ee Khim

art directors
Samuel Ng, Don Lee

senior writers
Fairoza Mansor, Wanda Tan

senior designer
Patricia Fong

executive photographer
Ealbert Ho

senior business relationship manager
Michele Kho

contributors
Ashutosh Ravikhrisnan, Wilson Pang, David Loh



Water for All: Conserve, Value, Enjoy
PURE is a quarterly publication by PUB, the national water agency. Published by MediaCorp Pte Ltd, Caldecott Broadcast Centre, Andrew Road, Singapore 299939. All rights reserved. Reproduction in whole or in part is prohibited. Copyright © is held by the publishers. Printed by KHL Printing Co Pte Ltd.





MAILbag

WE'D LOVE TO HEAR FROM YOU!

I've been hooked on *PURE* ever since I came across the magazine. The contents are educational, infographics enriching, and layouts eye-catching! My children enjoy reading it as well because of the beautiful pictures and funky fonts. *PURE* really caters to everyone from all walks of life, from globetrotters to educators, young to old.

I watched a dragon boat race during the recent SEA Games and it dawned on me how clean our Kallang River is! I suggest a feature on how the Singapore and Kallang rivers were cleaned up in the late 1980s. This will help everyone to better appreciate the efforts of our pioneer generation in making clean rivers possible!

Wong Mei Ling

I recently picked up a copy of *PURE* for the first time and read every page. The publication is very enlightening — I am surprised that Singapore has 17 reservoirs! Do keep up the excellent work on water education.

Everything from the design of *PURE* to its content is well put together. Vibrant colours, engaging topics and water news from Singapore and around the world — thumbs up! Thank you too for using paper sourced from responsible sources. How about a contest on water conservation, which will require readers to apply their knowledge about saving water?

Sharon Lee



This letter
WINS
a \$20
CAPITAVOUCHER

I am heartened to read about the Watermark Award winners and their conscientious efforts in protecting Singapore's precious water resources, in *PURE* Apr-Jun 2015. I am sure many others who read the article will be inspired to appreciate and conserve water even more. As we draw closer to our nation's 50th birthday, perhaps a feature on the late Lee Kuan Yew's vision in ensuring a steady water supply for Singapore would be timely?
Pui Pang Yong

Keep 'em coming!

Tell us what you like, what you don't, and what you'd like to see featured. The best letter published in the next issue will win a \$20 CapitaVoucher.

Post your thoughts on PUB's Facebook page at www.facebook.com/PUBsg (start your post with "PURE Mail"), email us at PUREmail@mediacorp.com.sg or snail mail your letter to PURE Mail, MediaCorp Pte Ltd, Caldecott Broadcast Centre, Andrew Road, Singapore 299939.



BLAST FROM THE PAST



DOWN MEMORY LANE

Recent theatre production *Quarters* harked back to the 1970s when PUB staff and their families lived in communal housing.

The cast of *Quarters*



PUB quarters at Jalan Berseh, 1982

A slew of cool projects branded with a strong national identity have emerged thanks to the SG50 Celebration Fund. For *PURE*, local theatre production *Quarters*, sponsored partly by the Fund, was a trip down memory lane. The two-day production by Avant Theatre and Language explored the lives of those living in two-storey PUB quarters in the 1970s. (In that era, it was commonplace for statutory boards to provide housing for their workers.) Theirs was a world of unlocked doors, shared television sets, the occasional squabbling over the use of a shared toilet, and forging neighbourly bonds — despite language and cultural differences.

This experience was one the play's director G Selvananthan, 47, is familiar with, having lived in such housing from the time he was born until he was 14 years old. "The multiculturalism we are celebrating

today, in my opinion, was seeded when people lived in housing with communal facilities. Everyone knew one another's problems, and was ready to offer help even without being asked," says Selva, whose father was a PUB Technical Officer. The sold-out play was performed in Tamil, Hokkien and Malay with English subtitles, at the Victoria Theatre.



Communal living was a colourful affair.

“THE MULTICULTURALISM WE ARE CELEBRATING TODAY, IN MY OPINION, WAS SEEDING WHEN PEOPLE LIVED IN HOUSING WITH COMMUNAL FACILITIES.”

Director G Selvananthan



A display of neighbourliness despite their differences

THIS IS HOW I

TEXT Falroza Mansor
PHOTOS Ealbert Ho STYLING Chin
HAIR & MAKE UP Melissa Yeo
PHOTO ASSISTANT David Loh

Home is where places you know get a makeover but still feel comfortingly familiar, as singer Farisha Ishak finds out at Sungei Tampines and Sungei Api Api.



Lookout deck and greener river banks at Sungai Tampines



celebrations for Singapore's Golden Jubilee, SG50, are in full swing and the country has become an essential destination for many visitors, with guidebook

publisher Lonely Planet voting us the number one city to visit in 2015.

Most Singaporeans, too, are busy rediscovering this place we call home, and taking time to appreciate what we have perhaps been taking for granted all along. Like our rivers, for example. Singer Farisha Ishak is one of them. Standing on the bank of Sungai Tampines, Farisha, winner of the inaugural edition of local reality singing TV competition *The Final 1* quips, "This could very well be a place to shoot [the next] National Day music video!"

And why not? From mere utilitarian waterways, Sungai Tampines and Sungai Api Api — which both run almost parallel to each

other in the northeastern part of Singapore — have been transformed into picturesque rivers. Their banks are now verdant with plants of varying hues and footpaths have been built alongside for visitors to get closer to the water's edge.

Both rivers wind their way through the Pasir Ris housing estate. The concrete banks along the 1.1km stretch of Sungai Tampines (between Tampines Expressway and Pasir Ris Drive 3), are now covered with creepers. Lush rain gardens, home to a variety of water-cleansing plants such as Chinese fringe-flowers, Texas Rangers and Mousetails, not only add to the scenery but also clean rainwater runoff before it is discharged into the river.

Community Plaza at Sungai Tampines



ON: CAJON, BERRY, MISC. JACKET & ACCESSORIES, NEW LOOK, HELIX
PINKO, OPPOSITE PAGE: JACKET & TROUSERS, NEW LOOK, BOSTON TOP
& JANE, MISC. PUMPS, CHIEFFI & CHERI, BANGGLES, W.E.



A 900m section of Sungei Api Api (also between Tampines Expressway and Pasir Ris Drive 3) has a cleansing biotope — comprising the wetland plants Grey Rush and Bog Bulrush — to filter out sediments while absorbing and removing pollutants from the water. But that's not all. Further towards the sea, just beyond Pasir Ris Drive 1, the natural mangrove area has been preserved, offering visitors an idyllic escape from the urbanised landscape.

THE PEOPLE'S PARKS

The rivers also boast wider footpaths as well as lookout decks and shelters with benches for residents to take in the charming waterfront view. "I can imagine how pleasant it is to do tai chi or yoga out here," says Farisha, lounging on a lookout deck along Sungei Tampines.

Sungei Api Api has also, since 2007, been adopted by Elias Park Primary School. Working with PUB, the school has installed 12 ceramic art pieces at three trellises along its banks. The artworks, crafted by Primary Four students, feature flora and fauna such as the Api Api Putih (a giant mudskipper) and the Atlas moth, both of which can be found in the mangrove ecosystem.

"In creating the ceramic artworks, the students not only enrich their science knowledge but also help to spread

Lush greenery along Sungei Api Api



LOOKOUT DECK WITH TRELLIS AT SUNGEI API API

awareness of the rich flora and fauna that can be found at Sungei Api Api, to the community," says Desri Lee. As head of the school's Aesthetics Department, she led the ceramic art project. "We hope to inspire residents to take care of the river and the environment so that the biodiversity can continue to flourish."

PUB's Chief Sustainability Officer Tan Nguan Sen echoed Desri's sentiments. "Both rivers were very scenic to begin with, what we did was to enhance their natural elements, improve the existing amenities and create a waterscape that is even more conducive for nature-lovers and the community at large."





“ I CAN IMAGINE HOW PLEASANT IT IS TO DO *TAI CHI* OR *YOGA* OUT HERE.”

Farisha, along Sungai Tampines



DID YOU KNOW?

1 THE MANGROVE AREA ALONG SUNGAI API API IS PART OF A 5-HECTARE PATCH OF MATURE MANGROVE FOREST.

It is home to a diverse number of tree species including the rare Kacang-kacang, Lenggadai and Bakau trees, all of which are considered endangered locally.

KACANG-KACANG



2 THE TAMPINES ESTATE IS NAMED AFTER SUNGAI TAMPINES.

The river in turn got its name from the Tampines tree (*Streblus elongatus*), purported to have grown in the area in the past. The tree is valued for its timber, and was in demand in the early 1980s.

3 API API REFERS TO A COMMON MANGROVE TREE SPECIES.

It has pencil-like breathing roots that stick up above the ground, rising from underground cable roots that are long and shallow, and spread out horizontally from the trunk.



SUNGAI API API

Image of Kacang-kacang, courtesy of www.tropicsandherbs.blogspot.com



A PRESERVED MANGROVE AREA AT SUNGAI API API

ALL THE RIGHT Chords

Singer Farisha Ishak on expressing herself through music and what makes her a uniquely (water-saving) Singaporean.

Before a *capella* became cool, thanks in part to Hollywood flick *Pitch Perfect*, singer and *PURE*'s cover personality Farisha Ishak was already rocking her own such group, way back in 2009. Just 15 then, Farisha and four school friends — who were also her choir mates — from Singapore Chinese Girls' School got together and called themselves the Rhythmist V. "So pretentious right?" the now 21 year-old recalls with a giggle.

From choir girl, Farisha is now *The Final 1*, having won, in 2013, the inaugural edition of reality singing show on MediaCorp's Channel 5. In February last year, the petite Hype Records artiste with the big voice released her debut album *Aligned*. You might have seen her on TV recently singing the winning SG50 song 'These Are The Days' in the lead-up to National Day. The song by Lee Chin Sin, a chef, was submitted as part of national songwriting competition 'SG50: The Gift Of Song', launched by MediaCorp. It emerged tops after more than 65,000 votes for the three songs in the final shortlist were cast over seven weeks.



TEXT
FAIROZA MANSOR



PHOTOS
DALBERT HO



"I'm always the one nagging my friends and family to be more conscious of the environment."

Farisha Ishak

1. HOW DO YOU FEEL TO HEAR AND SEE YOURSELF ON TV DAILY SINGING THE WINNING SG50 SONG?

It was a privilege for me to be involved in such a large-scale project. I'm heartened the public responded well to the campaign. It's great that the country is coming together for SG50 and I'm proud and honoured to be part of the celebrations.

2. IT HAS BEEN TWO YEARS SINCE THE FINAL 1. HAS A LOT CHANGED FOR YOU SINCE THEN?

It's pretty surreal to be in the entertainment and music industry, and I'm certainly not the same person I was in 2013. I've been blessed with many opportunities, including appearances in some episodes of MediaCorp Channel 5's TV series *Spouse For House*. From that experience, I am now more comfortable in front of the camera. I'll always be thankful for *The Final 1* because it gave me the platform to explore my passion in music.

3. WOULD YOU SAY SINGING IS YOUR CALLING?

I have always loved to sing because doing so makes me happy. After the competition, I decided to focus solely on my career in music. My family has been extremely supportive of me holding off my university education.

4. WHAT IS IT ABOUT YOURSELF THAT YOU CONSIDER TO BE 'UNIQUELY' SINGAPOREAN?

I think everything about me is very Singaporean and I'm proud of it! I love food and would travel anywhere in Singapore for a great dish even if it's a distance away from where I live. I don't

'chope' (reserve) seats with tissue though! (laughs)

5. AND ARE YOU AN ECO-FRIENDLY SINGAPOREAN?

I am! I'm always the one nagging my friends and family to be more conscious of the environment. I rarely use the air conditioner in my bedroom. Also, I believe that water is a very important resource, so I do little things like turning the tap on only when absolutely necessary.

6. YOUR BIRTHDAY WISH FOR SINGAPORE?

That we continue to strive to be the most dynamic, prosperous and integrated society in the world.

SHIRAZ: CHEN HUI; SUZUKI: MELISSA HO; ON
ROADS: JACET AND BANGLER; NEW LOOK: BANPUIT
AND NEOLUCE; W.E. CLOUTIER; CHANGS A WILSON



WATER, WATER

Everywhere!



Turkana women bathe and clean the catch on the shores of #LakeTurkana



Groundwater being pumped into an irrigation canal #USA



INSTAGRAMMERS PAID HOMAGE TO THE IMPORTANCE AND BEAUTY OF H₂O

Was your Instagram feed flooded with water-themed photos during the World Water Day 2015 weekend in March? Chances are, the people you follow were contributing to the app's weekend hashtag project. Dubbed #WHPfromthewater, it urged Instagrammers to reflect upon their connection with water — and boy, did they do just that!

With filters in tow, they eagerly explored their surroundings, looking for hashtag-worthy subjects to snap. Many took to the outdoors to capture water in its natural setting, creating dramatic shots of glaciers, clouds and waves, while others turned to the urban world to highlight our dependence on the resource for both work and play. Here are some of our favourites from the 35,000 photos that were submitted.



10 PURE

Roadside spectacle #McNayFalls #BigSur

THE INSPIRATION

→ The project was inspired by the work of Hungarian photojournalist Balazs Gardi (@balazsgardi), who has spent the past decade photographing water-related stories around the world.



@balazsgardi



Instagrammer
rickyfitriady

2 weeks ago #WHPfromthewater
#visualsforlife #livefolk #thisisindonesia



Instagrammer
gotttedeterre

Eau/Paris/12h52
#waterart #puddlegram #eau



Instagrammer
raffpost

Today is world water day! Let's celebrate!
#worldwaterday #blessed



Instagrammer
dream_zone_ibiza

Puestas de increíbles en
#sea #clouds #ibiza #whpmonochromatic



Instagrammer
giorgianna2907

Monsoon in Dalat_Vietnam
#travelphotography #Vietnam #streetphotography



Instagrammer
peppospoon

Galaxea coral
#liveauthentic #coral

WANT TO SEE MORE?

→ Search for the hashtag
#WHPfromthewater in
Instagram to see more!



Instagrammer
thedailywatercolor

Elephant family, original watercolor
painting by Katrina #illustration #animals



ice ice baby

From under the sea to icy poles, **PURE** brings fresh water scoops from around the world!

Na Pa Hai Lake during dry season

NOT ENOUGH SNOW!

In a bid to host the **2022 Winter Olympics**, Beijing has already started building ski facilities around the mountains of Yanqing, 55 miles away from the capital. The only problem — there is no snow! The area is **semi-arid**, receiving only about 16 inches of rain a year. Undeterred, Beijing plans to divert water from local reservoirs to create artificial snow, but scientists have questioned the environmental impact of the bid which could affect regional water supply for the already-parched northern regions.



NATURE

SAVE THE POLAR BEARS!

Besides losing their homes due to the loss of ice caused by global warming, polar bears in the Arctic region are now **battered by a new threat: chemical pollution**. As a result of human activities like mining and oil and gas exploration, pollutants which can cause cancer and have other nasty effects are found in Arctic waters. The bears have been a victim of these pollutants, which cause their bones to become weak and compromise their reproductive functions.



The endangered

Protecting Pitcairn

The British government has designated a vast area around the Pitcairn Islands in the South Pacific **AS THE WORLD'S LARGEST PROTECTED MARINE RESERVE**. Home to more than 1,200 marine species, including **critically-endangered ones like the hawksbill turtle and Pitcairn angelfish**, the islands' waters will be off limits to commercial fishing as well as undersea mining.



DEEP DIVE

Diving in Singapore's waters will soon be possible! Two dive trails at Sisters' Islands Marine Park are being piloted by the National Parks Board. The trails — complete with underwater signboards that provide information on **marine biodiversity** — will bring divers up close with Singapore's underwater treasures such as feather stars or shy butterfly fish.

Under the (Singapore) seal



SG50
Special

Singapore turns

50

PURE TRACES THE TRANSFORMATIVE JOURNEY OF OUR
RIVERS AND RESERVOIRS **▶ P14**



▶ **Where our heart is**
Water spots where
memories were made



▶ **Red, white and green** Eco-products
perfect for SG50 bashes



▶ **Marching on**
A PUB staff member on
his NDP experiences



SG
50



PHOTO: PUB

1987



SINGAPORE AND KALLANG RIVER

The clean-up of the Singapore and Kallang rivers were completed. 46,000 unsewered squatters, including street hawkers, pig and duck farms, and backyard industries were resettled. Farming activities were eventually phased out.

1977



UPPER PEIRCE RESERVOIR

During the opening ceremony of the Upper Peirce Reservoir on 27 February 1977, the late Mr Lee Kuan Yew, who was then Prime Minister, threw down a challenge to clean up the Singapore River. "It should be a way of life to keep the water clean, to keep every stream, every culvert, every rivulet free from unnecessary pollution," he said.

1975



LOWER PEIRCE RESERVOIR Singapore's second-oldest reservoir was renamed — 63 years after it first opened — after Upper Peirce Reservoir was constructed.

SUNGEI PANDAN & PANDAN RESERVOIR

The swampy grounds of Sungei Pandan made it ideal for prawn farming. Prawn farming sustained a number of kampungs and villagers, and continued until the mid-1960s. In 1974, the Pandan Reservoir was built by enclosing the swamps of the Sungei Pandan estuary with a 6.2km earthen dyke. A tidal gate was built to allow freshwater from the river to enter the reservoir, and to divert excess water into the sea. Raw water from the reservoir is treated at the Choa Chu Kang Waterworks before being distributed in western Singapore.

1960s
- 1970s



1800s



ROCHOR CANAL Completed in 1836, Rochor Canal was built to meet the irrigation needs of farmers who grew crops along Serangoon Road. Later, cattle trading developed into the main economic activity of the area and many Indian migrants who were involved in the trade settled in the area. Many streets in Little India are named after this cattle trade legacy, such as Buffalo Road and Kandang Kerbau which means 'buffalo or cattle pen' in Malay.

START
HERE!

THE PAST

Once upon a time

Prawn ponds, pig farms and paddy fields... PURE traces the transformative journey of some of Singapore's rivers and reservoirs into picturesque ABC Waters spots!

Lower Seletar Reservoir



2006

ABC WATERS

The Active, Beautiful, Clean Waters (ABC Waters) programme was launched by PUB to transform Singapore's water bodies beyond their utilitarian purpose into beautiful and clean streams, rivers and lakes, creating a vibrant City of Gardens and Water.

MARINA BARRAGE

The first ABC Waters project, Kolam Ayer ABC Waterfront, officially opened in April 2008. In the same year, on 31 October, Marina Barrage was officially opened. The barrage is a dam built across the mouth of Marina Channel to create Singapore's 15th reservoir, the Marina Reservoir.



2008

THE PRESENT

Pandan Reservoir



2010



PANDAN RESERVOIR

The first ABC Waters project in the West of Singapore, Pandan Reservoir underwent a renewal with the addition of water sports facilities. Activities such as canoeing and kayaking, rowing, sailing, sport fishing, and radio controlled- and electric boat sailing are available here. The reservoir's amenities centre also houses the Singapore Canoe Federation.



ROCHOR CANAL

Rochor Canal today, as featured in PURE Apr-Jun 2015, is a revitalised waterway lined with glass-sheltered pergolas. Rain gardens not only beautify the area but also act as a filter for rainwater runoff.

2015



SUNGEI ULU PANDAN AND SUNGEI PANDAN

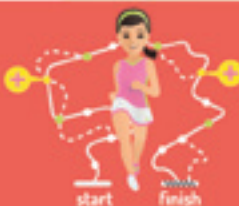
These waterways were transformed into Singapore's first "river classroom" where students learn about cleansing stormwater runoff through green design features such as cleansing biotopes and vegetated swales. It is also a great place to conduct experiments on water quality.

2013

Explore 'em all!

► A series of guided walks around 14 ABC Waters locations throughout Singapore over the next two years has just been launched. Organised by the Hong Kah North Active

Aging Committee, the first walk took place at Bishan-Ang Mo Kio Park on 28 June. The walks are scheduled to take place on the fourth Sunday of each month. Other locations include the Lorong Halus Wetland, Jurong Lake and Geylang River.



SG50
Special



Where our heart is

As an island nation surrounded by water, it is no surprise that Singaporeans earmarked these "water spots" as some of their favourite places!



ERP



1

2



MARINA BARRAGE



SINGAPORE RIVER



4

5

SG

Heart Map, one of the many SG50 projects that mark Singapore's Golden Jubilee, celebrates the places that define Singapore as our home. Over six months, Singaporeans from all walks of life contributed more than 80,000 memories and stories of their most

cherished places. From these crowd-sourced memories, 50 significant places were identified and these were unveiled to the public in May this year. A series of SG Heart Map celebrations will also be held later this year, so keep a look out for them!



MARINA BAY

Get Involved!

► Visit www.heartmap.sg to contribute your own personal story about your favourite places and read many others contributed by fellow Singaporeans. You can also sign up for special guided tours to some of the places listed on the SG Heart Map!



BISHAN-ANG MO KIO PARK

3

PUNGGOL WATERWAY

50 SPECIAL PLACES

HERE'S A LIST OF THE TOP 50 PLACES THAT SINGAPOREANS HOLD DEAR TO OUR HEARTS!

- | | | |
|-------------------------------------|------------------------------------|------------------------------|
| ♥ Bishan-Ang Mo Kio Park | ♥ MacRitchie Reservoir | ♥ River Safari |
| ♥ Bugis | ♥ Marina Barrage | ♥ SIFTI Military Institute |
| ♥ Bukit Timah | ♥ Marina Bay | ♥ Sentosa |
| ♥ Changi Village | ♥ Marina Bay Sands | ♥ Singapore Botanic Gardens |
| ♥ Chinatown | ♥ Marlin Park | ♥ Singapore Changi Airport |
| ♥ Chinese Garden | ♥ Mount Faber | ♥ Science Centre Singapore |
| ♥ Chong Pang Market and Food Centre | ♥ National Library Building | ♥ Singapore Flyer |
| ♥ Downtown East | ♥ National Museum of Singapore | ♥ Singapore River |
| ♥ East Coast Park | ♥ National University of Singapore | ♥ Singapore Sports Hub |
| ♥ Esplanade - Theatres on the Bay | ♥ Orchard Road | ♥ Singapore Zoo |
| ♥ Gardens by the Bay | ♥ Pasir Ris Town Park | ♥ Singapore Discovery Centre |
| ♥ Haw Par Villa | ♥ Pulau Tekong | ♥ Sentosa City |
| ♥ Holland Village | ♥ Pulau Ubin | ♥ Tanjong Pagar |
| ♥ Jurong Bird Park | ♥ Punggol Waterway | ♥ Tiong Bahru |
| ♥ Kampong Glam | ♥ Raffles Place | ♥ Toa Payoh |
| ♥ Katong/Joo Chiat | ♥ Resorts World Sentosa | ♥ VivoCity/MaritimeFront |
| ♥ Little India | | ♥ West Coast Park |

TEXT FAROZA MAKSOR

IMAGES SHUTTERSTOCK

01 MACRITCHIE RESERVOIR

"More than 30 years ago, this was the place where I spent a lot of time training for cross-country races during my secondary school days. With its beautiful scenery, running around the reservoir has always been fascinating."

- Pl Lim

02 BISHAN-ANG MO KIO PARK

"When I was a kid, my parents used to drag my sister and I out of bed on weekends for family cycling rides to Bishan Park. [The rides] felt really long. But at some point, I got over the fatigue, and began to enjoy it, sometimes imagining I was competing in the Tour de France." - Aaron Chan

03 PUNGGOL WATERWAY

"I spent my childhood in Punggol, catching fish, wandering through the farms and watching 'wayang' (Malay for 'live performances'). Today, Punggol is completely different. The beautiful Punggol Waterway flows through where my grandfather's house was. I am glad that despite building for a bigger population, there are many beautiful parks for fun and recreation in Singapore." - Mag

04 SINGAPORE RIVER

"A symbol of transition for Singapore, from the 1800s when it was trade-oriented, the Singapore River is now a landmark of the many cultures in Singapore... It is a truly iconic area all Singaporeans can enjoy."

- Andrew Tan

05 MARINA BARRAGE

"My husband and I used to date at the Marina Barrage. The barrage is pitch-dark at night and the nearby dim lights add to the romantic atmosphere. It's the vision of the late Mr Lee Kuan Yew and a place where my fondest memories lie."

- Ho Chin Ee

06 MARINA BAY

"Marina Bay to me is a microcosm of our city state — the dynamism and energy of modern Singapore with its glittering buildings juxtaposed against landmarks like Clifford Pier that recall history. It's a beautiful place to work and play. My office is in Marina Bay Financial Centre Tower 3, and I enjoy jogging around the area in the cool mornings and breezy evenings." - Karen Ngui



SG50
Special

Red, White & Green

Celebrate Singapore's birthday
with these accessories and home
décor items that are earth-friendly!

1. IPAD MINI CASE

\$29, BGO ECOSHOP

Not just cute, this well-padded iPad case is handmade with love by a local seller who stocks only environmentally-conscious products.

2. WATER-POWERED THERMOMETER ALARM CLOCK

\$18.80, GREENPAL STORE

This clock-cum-thermometer does not require batteries or electricity. Just fill it up with water and the device will work for a few months before a refill is needed.

3. HOPSCOTCH KIDS™ WATERCOLORS NAIL POLISH

\$21.90, THE FIRST GREEN STORE

Show your patriotism by applying this non-toxic, kid-friendly alternative to solvent-based nail polish. Vibrantly red, it contains no harsh chemicals and is fragrance-free. Plus, the packaging is biodegradable!

4. BOX LIGHT

\$230, ETHNICRAFT

Sleek and stylish, this 'light in a box' gives out a warm glow in the dark. Best of all, the company that designed it only sources for recycled teak wood to construct its products.



WHERE TO
GET THEM?

WWW.BGOECOSHOP.COM, WWW.BROOKSTONE.COM, WWW.GREENPALSTORE.COM,
WWW.ETHNICRAFT-ONLINE.COM.SG, WWW.THEFIRSTGREENSTORE.COM, WWW.ECOU.COM.SG

**All prices are in SGD unless otherwise stated, and are accurate at the time of print.

5. SELF-WATERING PLANTER
US\$39.99, BROOKSTONE

Going on a holiday? Fret not! this planter features a water reservoir which provides water for the plant for about two weeks. A water gauge indicates when the reservoir is empty and needs to be refilled.



6. THERMAL PORCELAIN MUG
\$12.80, GREENPAL STORE

"I am not a paper cup," it says, and indeed it isn't. Cut down your use of disposable beverage cups with this mug that comes with a durable, heat-resistant and non-toxic silicone lid and sleeve.

7. SUGARCANE PLATES
\$7 FOR A PACK OF 20, ECO U

Be a green host at your next dinner party with these biodegradable and compostable tableware items. Made from sugarcane fibre, these are oil-proof and microwave-safe!



BEST

EDITOR'S SELECTION

STRIPED PAPER STRAWS
\$4 FOR A PACK OF 25, ECO U

These festive-looking biodegradable straws are ideal for picnics and parties. Waterproof for 24 hours once used.



What's that Buzzword?

➔ When something is **biodegradable**, it can be decomposed naturally by the action of biological agents such as bacteria. Using biodegradable products can help to reduce the volume of waste in landfills!

Marching on

PUB's Senior Technical Officer Mohamed Annuar Bin Mohamed is both a passionate Singaporean and employee.



Marching proudly at the 2010 NDP

Q I participated in the 2010 National Day Parade as part of the PUB contingent after persuasion from some colleagues. The best part of the experience for me was bonding with colleagues from various departments. We had a good laugh during training as some had never marched before and had problems coordinating their movements."



Q MY FAVOURITE PART OF THE ND CELEBRATIONS? THE FIREWORKS, OF COURSE. I AM LUCKY TO BE STATIONED AT THE MARINA BARRAGE, SO WE GET THE BEST VIEW! THE VERY NEXT DAY, I HAVE TO MAKE SURE THE CONTRACTORS CLEAN UP ANY LITTER IN THE WATER IN THE SINGAPORE RIVER AND IN THE MARINA RESERVOIR. I TAKE A LOT OF PRIDE IN OUR CLEAN WATERWAYS."

Q NATIONAL DAY (ND) IS A BIG AFFAIR IN SINGAPORE, AND WHO CAN BLAME US FOR WANTING TO CELEBRATE OUR INDEPENDENCE IN SUCH A FESTIVE MANNER? WE'VE ACHIEVED SO MUCH IN SUCH A SHORT TIME. I AM REMINDED OF OUR PROGRESS EVERY DAY I STEP INTO MY "OFFICE" — THE MARINA BARRAGE — AND LOOK OUT AT MARINA BAY. THIS RESERVOIR IN THE CITY IS THE INCREDIBLE VISION OF THE LATE MR LEE KUAN YEW."



Mohamed Annuar Bin Mohamed, 52
Senior Technical Officer, Catchment and Waterways Department

PHOTO: WILSON PANG



PUB's NDP float (1978)

PUB at the NDP!

PUB has been involved in the National Day Parades since the 1970s. Staff marched with the PUB flags flying high and the PUB float toured the streets of Singapore. This year, PUB will be a part of the Vintage Parade, which re-enact street parades that took place in the early years of our independence.



NDP (1978)

Watermark

AWARD

Recognising outstanding
water contributions



Watermark Award Nominations are now open.

The Watermark Award recognises water stewards for their outstanding contributions and commitment towards protecting and raising awareness of Singapore's precious water resources.

Nominate exemplary individuals or organisations with extraordinary contributions towards Singapore's water sustainability for the prestigious Watermark Award.

Nominations open from **1 July to 31 August 2015.**

For more information, visit
www.pub.gov.sg/watermarkaward



Water for All: Conserve, Value, Enjoy

The Virtual water World

What exactly is a water footprint, and how big is yours? Find out here....

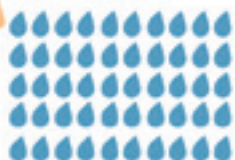
The saying 'out of sight, out of mind' is an apt one in discussions about 'virtual' water. Unless you are a farmer, you don't see water being used to meet the drinking and feed-growing needs of cattle; all you are aware of is that cattle is the source of your beef steak or dairy milk. Likewise, chances are, you may not know how much water is required to irrigate paddy fields when all you see is a bowl of rice. Because the water is not present in your immediate environment and is 'virtual', you are not aware of how much water is needed to produce the food and drinks, as well as products and services you consume — and this volume of water required is your water footprint.

Believe it or not, the average global water footprint of an individual is about 3,795 litres per day!

PURE highlights some common food and drinks in an average person's daily diet, and breaks down the virtual water content of each item.



BREAKFAST ITEMS



2,500 litres

for one big piece (500g) of cheese

LEGEND

*ONE DROP OF WATER = 50 LITRES OF VIRTUAL WATER

200 LITRES

for one egg



650 LITRES

for a loaf (500g) of bread



GRAINS


450 LITRES

for one corncob (500g)




TEXT
WANDA TANIMAGES
GETTY IMAGES

BEVERAGES

90 LITRESfor one pot
(750ml)
of tea **1,000 litres**for one litre
of milk **840 LITRES**
for one pot
(750ml) of coffee


MEATS

4,650 litresfor one beef
patty (300g) **1,170 LITRES**

for one chicken breast fillet (300g)

**1,440 LITRES**

for one pork steak (300g)

**1,700 litres**one package
(500g) of
rice **650 LITRES** for a pack
(500g) of wheat**50 litres**for one
orange 

FRUITS

2,500 LITRES

for one coconut

**560 LITRES**

for one mango



BEHIND THE POSTER

The term 'virtual water' was first coined by British geographer Tony Allan in 1993. Dutch scientist Arjen Hoekstra then came up with the water-footprint concept and, together with other researchers, calculated the amount of virtual water used in the production of everyday commodities. In 2007, German designer Timm Kekeritz created the Virtual Water Poster as a way of visualising the data, thus urging people to adopt more water-sustainable consumption habits.

The infographics seen here are taken from the second edition (2010) of the Virtual Water Poster. There is also an iPhone Virtual Water app available on iTunes, and it offers information on a broader range of products. To order a copy of the poster, download the interactive app, and to find out more about the Virtual Water Project, visit <http://virtualwater.eu>.

Image courtesy of <http://virtualwater.eu>

READY, GET DIRTY, GO!

Students sharpened their skills as water scientists and engineers at the Sembcorp Water Technology Prize 2015!



The process of water treatment holds a wealth of knowledge, as a group of 80 secondary school and junior college students discovered. At the fifth edition of the Sembcorp Water Technology Prize, held from 19 to 20 March 2015, these students experienced first-hand the process of transforming raw water into clean water. The students competed to create their own mini water treatment plants — using ceramic membrane filters, pumps and aerators to turn a solution of sand and water into clean water. In groups of threes and fours, they also proposed concepts for a low-cost water treatment system for a riverside community in a developing country.

The competition also taught them about advanced technologies such as membrane bioreactors — which combine membrane filtration and biological processes to treat used water (see right). Team Amphirite from Raffles Girls' School

(RGS) took home the competition's top prize of \$1,500 and a two-week internship with Sembcorp Industries. The second and third teams, Victoria Junior College and Bukit Panjang Government High School respectively, won cash prizes of \$1,000 and \$500 each.

Dr Vivian Balakrishnan, Minister for the Environment and Water Resources, presented the winning teams with their prizes at the World Water Day 2015 celebrations.



Students getting their hands dirty — literally!

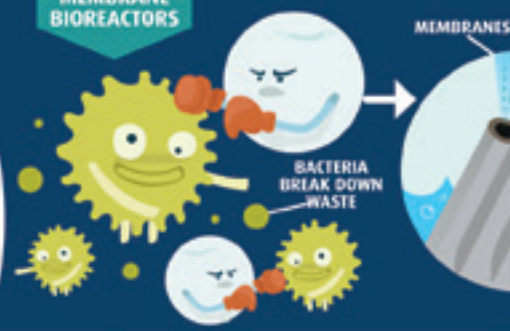


Trying to purify murky tubs of water!

24 PURE



MEMBRANE BIOREACTORS





TEXT
ASHUTOSH
RAVIKISHAN



IMAGES
COURTESY OF RAFFLES GIRLS' SCHOOL
AND VICTORIA JUNIOR COLLEGE

ABOUT THE COMPETITION

→ The Sembcorp Water Technology Prize is organised by Science Centre Singapore, supported by PUB and sponsored by Sembcorp Industries. The annual competition aims to stimulate students' interest in the water industry through experiential learning by using technology to creatively tackle water and environmental issues. All secondary schools and junior colleges are invited to participate.



The winning team presenting their proposal to the panel of judges



LEARNING SOMETHING NEW

“ THIS COMPETITION ENCOURAGED US TO THINK FURTHER FROM WHAT WE'VE LEARNT. THINKING CREATIVELY IS AN EXTREMELY USEFUL SKILL, NEEDED FOR THE PROGRESSION OF SCIENCE. THE COMPETITION HAS ALSO ENABLED US TO UNDERSTAND THE IMPORTANCE OF MEMBRANE FILTRATION SYSTEMS IN WATER TREATMENT.”

Team Amphitrite from RGS, comprising (l-r) Jamie Lim, Shannon Tan and Ding Ning Ke, all 15 years old.



THE WINNING TEAM

“ AS A NATION WITH LIMITED WATER RESOURCES, WE DEPEND LARGELY ON WATER MANAGEMENT. FROM THE COMPETITION, WE LEARNED THAT TECHNOLOGY IS A 'QUICK-FIX' TO WATER ISSUES, BUT TO TRULY BE SUSTAINABLE, ALL PARTIES HAVE TO DEVOTE THEIR EFFORTS TOWARDS CONSERVING WATER RESOURCES.”

VJC Team 1, comprising (l-r) Zhuang Tianke, 17, Song Yixuan, 16, Yu Yuezhan, 18, and Pu Ruohan, 17.



SECOND PRIZE WINNERS



WHAT'S THAT?

→ Membrane bioreactors are used in the treatment of used water. A bioreactor houses bacteria which break down waste products in used water, after which membranes — with fine pores invisible to the eye — filter the remaining impurities. The treated water can be used to supply industries or as feedwater for NEWater production. In 2006, Sembcorp Industries was the first company to successfully apply membrane bioreactor technology to treat industrial used water in Singapore.



TREATED USED WATER

GREEN NOBEL

The Goldman Environmental Prize honours those who lead grassroots campaigns to protect the natural world.

Each year, the Nobel Prize is given to people who have made outstanding contributions in chemistry, physics, medicine, literature, peace and economics. It is arguably the world's most prestigious award — yet for a long time, there was no such honour for environmental activism. In 1989, the Goldman Environmental Prize was established to put right that wrong!

The Prize (dubbed the 'Green Nobel') is awarded annually to ordinary citizens who have led environmental campaigns in their own communities, often at great personal risk. *PURE* features three of the six 2015 recipients.

The six Goldman Environmental Prize 2015 recipients



Phyllis Omido talking to local children in Mombasa, Kenya



DEVOTED
MOTHER
AND ACTIVIST
KENYA

PHYLLIS OMIDO

Three months after Phyllis Omido was hired in 2007 as a community liaison officer at a battery-smelting

plant in the city of Mombasa in Kenya, her infant son became violently ill. Hospital tests revealed lead poisoning, likely passed on via her breast milk. There was no doubt in her mind that the factory's environmentally-unsafe operations were responsible. By emitting toxic lead fumes into the environment and releasing untreated acid wastewater into streams where people bathed, the plant was endangering the lives of employees and nearby residents, especially children.

Omido promptly quit her job and began a crusade to shut down the factory, galvanising the community amid increasing reports of lead contamination in

children. She stepped up peaceful street protests and letter-writing campaigns, even in the face of police arrests and kidnap threats. Finally, the plant was closed in 2014.

Phyllis Omido kneeling by a contaminated stream





Howard Wood in his diving gear

HOWARD WOOD

Howard Wood has lived on the Isle of Arran, Scotland since he was a teenager. A keen diver, he was dismayed by the gradual destruction of local marine wildlife such as herring and cod. Sustained lobbying by the commercial fishing industry had resulted in overfishing and indiscriminate plowing of the seabed. Such practices posed a threat to the livelihood of small-scale fisheries, and to the fragile marine habitat.

In 1995, Howard Wood co-founded the Community of Arran Seabed Trust to champion sustainable management of marine resources. In 2008, the group's efforts were rewarded when the Scottish government established its first No Take Zone in Arran's Lamlash Bay, banning the removal of marine wildlife from the area. Last year's creation of the South Arran Marine Protected Area further boosted the Trust's marine conservation work.



COMMUNITY OF
ARRAN SEABED
TRUST
SCOTLAND



Howard Wood with locals at Lamlash Bay's No Take Zone



Myint Zaw with locals on the mighty Irrawaddy River



ENVIRONMENTAL
JOURNALIST
MYINT ZAW

MYINT ZAW

Environmental journalist Myint Zaw knows first-hand how important Myanmar's Irrawaddy River is, having grown up in its rice-growing delta. At 2,170km long, the river is an essential source of irrigation, a major transportation system, a rich supplier of fish and

the birthplace of Myanmar's civilisation. In 2009, construction of the China-proposed, 6,000-megawatt Myitsone Dam began on the river. Its objective was to deliver hydroelectric power to southern China, but it would cause large-scale displacement of people, loss of biodiversity and other negative consequences.

Despite Myanmar's tight government scrutiny and poor telecommunications infrastructure, Myint Zaw held a series of art exhibitions to showcase the devastating impacts of the dam. A national movement soon arose in opposition to the project. In 2011, the newly-elected civilian government bowed to public pressure and suspended the dam's construction.



Myint Zaw with staff in Yangon, Myanmar



ABOUT THE PRIZE

→ The Goldman Environmental Prize was founded in San Francisco, USA by the late Richard and Rhoda Goldman, noted philanthropists and husband-and-wife duo. It is the world's largest award honouring grassroots environmentalists, with winners each receiving US\$175,000. Winners are announced every April to coincide with Earth Day, with two separate award ceremonies held in San Francisco and Washington, DC. To find out more, visit WWW.GOLDMANPRIZE.ORG.

About 192 countries celebrate Earth Day each year, with events that range from festivals and concerts to rallies and campaigns. The goal is to raise awareness on issues like climate change, pollution, water scarcity and loss of biodiversity, and to also drive people to do their part and keep our planet healthy.

1 INDIA

The World Bank estimates that 21 per cent of communicable diseases in India are related to unsafe water.

EARTH DAY NETWORK

This year, the Earth Day Network in India worked with partners across 45 cities to encourage citizen action. Many participants were school children, and common activities included tree-planting and awareness campaigns.

PETA

A supporter of People for the Ethical Treatment of Animals (PETA) takes an open bath during a vegetarianism campaign in Mumbai, India. PETA says it takes more than 15,000 litres of water to produce one kilogram of meat, the equivalent of taking 75 baths.

TAKING ACTION

Earth Day on April 22 this year was marked in a variety of ways. *PURE* highlights some of them.



Finding Inspiration in the Shower



THE FARMING EXPERIENCE WITH A DIFFERENCE

2 CHINA

There are 119 million people in China without access to improved drinking water, says Unicef.

BEAUTIES IN LOUDI

Models wearing face-kinis promote Earth Day with an off-the-beaten-track photoshoot on the terraces of a farm in Loudi, Hunan province.

CHINA PANDAS

A shopping mall in Taiyuan, China, displayed 280 panda sculptures on Earth Day to raise awareness for protection of the environment, and said that 500 more will be added at a later date.



AN INDIAN YOUTH DRESSED
AS A TREE IN SUPPORT OF
EARTH DAYTH
E
A
RDENVER MAYOR MICHAEL
HANCOCK HIGH-FIVES A
TOILET MASCOT SPONSORED
BY DENVER WATER

B THE UNITED STATES

California is in its fourth year of drought, and mandatory cutbacks on water use were recently imposed.

DENVER DAY

Earth Day Denver is a free fair with sustainable food trucks, educational displays and environmentally-friendly local businesses showing off their services. This city-sponsored event is zero waste and those who attended were taught which bin to use for their trash.

Comedians Dan Aykroyd and
Jon Lovitz doing their bit
for Earth



KEEP IT CLEAN

Held in Hollywood, Keep It Clean is a live comedy benefit for the Waterkeeper Alliance, an organization that focuses on issues that affect waterways like rivers, streams and coastlines around the world. It featured names such as Ray Romano, Dan Aykroyd, Jon Lovitz, Martin Short and Tig Naturo.

Masked crusader
on the streets of
the Philippines



4 THE PHILIPPINES

Typhoons, earthquakes and volcano eruptions happen here all the time. An estimated 26 per cent of Filipinos do not have improved sanitation, says Unicef, and access to clean water is also a problem.

IMPERSONATOR

A protester impersonating Philippine President Benigno Aquino III rallied outside the Department of Environment and Natural Resources, calling for attention to various environmental issues hounding the country.



ZOMBIES

'Zombies' took to the streets in a rally to call on President Aquino to defend the Clean Air Act from legislative attacks and keep a local incineration ban intact.



Pearlyn Cai, 26
MISS EARTH SINGAPORE (WATER) 2014

QUEEN OF GREEN

Flight attendant Pearllyn Cai, 26, has had an eventful year as Miss Earth Singapore (Water) 2014.

➔ What prompted you to join the Miss Earth Singapore beauty pageant? We only live once, so I wanted to step out of my comfort zone and experience something new. Miss Earth is also different from other beauty competitions because it is a pageant with a cause.

➔ What sparked your interest in the environment? During my trips to South Korea, the recycling habits of the locals caught my attention. I opted for a homestay and noticed how residents sorted their waste into separate containers; for example, there were different disposal units for cooked and uncooked food waste as well as bottle caps and labels. I feel that we Singaporeans could and should do the same for our environment.

➔ What water-related endeavours have you taken part in over the past year? Together with Miss Earth Singapore

2015 contestants, I participated in the International Coastal Cleanup Singapore @ Pasir Ris Beach 6 on 18 April 2015. We picked up rubbish along the shore. There were 100 participants from various schools, organisations and green groups which made the event more enjoyable.

➔ How has winning the title changed you at a personal level?

I didn't expect to win the title, so I was shocked! The experience has been a wake-up call for me; it has made me think harder about water conservation. I have learned that there are many ways to save water besides not leaving the tap running unnecessarily. I hope to inspire and encourage others, especially the younger generation, to make our environment a better one.

➔ Tell us something people might not know about you.

My favourite hobby is baking. Baking can be unpredictable, just like humans, and that's what makes it fun.



A BEAUTY PAGEANT WITH A CAUSE

🗨️ Held annually, Miss Earth Singapore aims to raise awareness of the environment and promote sustainable development. Four winners are crowned each year to represent the elements of earth, air, water and fire. These 'green ambassadors' are actively involved in projects island-wide throughout the year. The winner representing the 'earth' element also becomes Miss Earth Singapore and competes at the international level. To find out more, visit www.missearthsingapore.com.





READ AND WIN!

(ACROSS)

- 1** The _____ tree is valued for its timber, and was in demand in the **EARLY 1980s**. (8)
- 2** This team won **TOP PRIZE** in the 2015 Sembcorp Water Technology Prize competition. (9)
- 3** The **GOLDMAN ENVIRONMENTAL PRIZE** is also known as the '_____ Nobel'. (5)
- 4** What was the **SOCIAL MEDIA** platform used for the #WHPfromthewater project? (9)
- 5** The Pitcairn _____ is an endangered **MARINE SPECIES** found in Pitcairn's waters. (9)

(DOWN)

- 6** Miss _____ is a pageant with a **CAUSE**. (5)
- 7** This US state is facing its **FOURTH YEAR** of drought. (10)
- 8** **API API** refers to a common _____ tree species. (8)
- 9** Water _____ refers to the **VOLUME OF WATER** required to produce food, as well as products and services. (9)
- 10** What **KIND OF POLLUTION** are polar bears threatened with in the Arctic? (8)

TEST YOUR KNOWLEDGE OF THE STORIES IN THIS ISSUE AND STAND A CHANCE TO WIN A **WATER WALLY GOODIE BAG!**

Scan this page and email it together with your particulars (including IC and contact numbers) to PUREmail@mediacorp.com.sg with the subject "PURE Quiz" or snail mail it to PURE Quiz, MediaCorp Pte Ltd, Caldecott Broadcast Centre, Andrew Road, Singapore 299939. Submit your entries by 31 August 2015.

KALLANG RIVER @ BISHAN-ANK PARK
NOW



KALLANG RIVER @ BISHAN-ANK PARK
BEFORE

WISH WE MAY, WISH WE MIGHT

PURE readers share their hopes for the state of water in Singapore, 50 years into the future.

Every gadget and facility will be water-efficient. For example, all loos will be **WATER-LESS AND NO ONE WILL COMPLAIN!**

→ Tan KC, 41, Engineer

All longkangs ('drains' in Malay) will be transformed into scenic ABC Waters sites along which residents can take a **STROLL**. Future generations will not know what a drain looks like.

→ Sangeeta Renga, 37, Insurance Agent

Water conservation will be a norm, not an exception. When tourists visit, they too will be expected to adopt **GOOD WATER SAVING HABITS.**

→ Saa'diah Sulaiman, 29, Teacher

Maybe some of us can live **UNDERWATER!**

It will be like my favourite cartoon show *Bubble Guppies*.

→ Marissa Lee, 7, Student

I hope we will have our 5th and 6th national taps which are independent of **THE WEATHER.**

→ Derek Lau, 30, Marketing Manager

Tomorrow's Knowledge, Today



At Grundfos, we are committed to innovation. Our knowledge consultants are always at the forefront of the latest technological advancements. The responsibility to our customers and business partners has always been this simple – to deliver the most expert sustainable water solutions.

Tomorrow's Knowledge, Today from Grundfos.



**Cut your pump's energy consumption
by up to 60%!**

Visit www.tomorrowspumpstoday.com
to view how choosing the right pump can
contribute to energy sustainability and savings.

be
think
innovate

GRUNDFOS 

Saving water is in our hands

Saving a little water can make a huge difference. Better still, we can all enjoy our daily activities and save water at the same time. Save 9 litres by showering one minute less. Save 11 litres by using a cup when you brush your teeth. Save 14 litres by washing vegetables with a tub of water instead of a running tap. Every little bit helps. Saving water is in our hands.



**Every drop counts.
Use only what you need.**

For more information visit us at:
www.pub.gov.sg/conserv or www.facebook.com/PUBsg

 **PUB**

Water for All: Conserve, Value, Enjoy