PENANG MONTHLY

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PENANG PROFILE

PBAPP TAKES ON THE DIFFICULT TASK OF SECURING WATER FOR THE FUTURE

SECURE WATER SUPPLY, SECURE FUTURE FOR PENANG

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THE WATER CRISIS

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COVER STORY

SECURE WATER SUPPLY, SECURE FUTURE FOR PENANG

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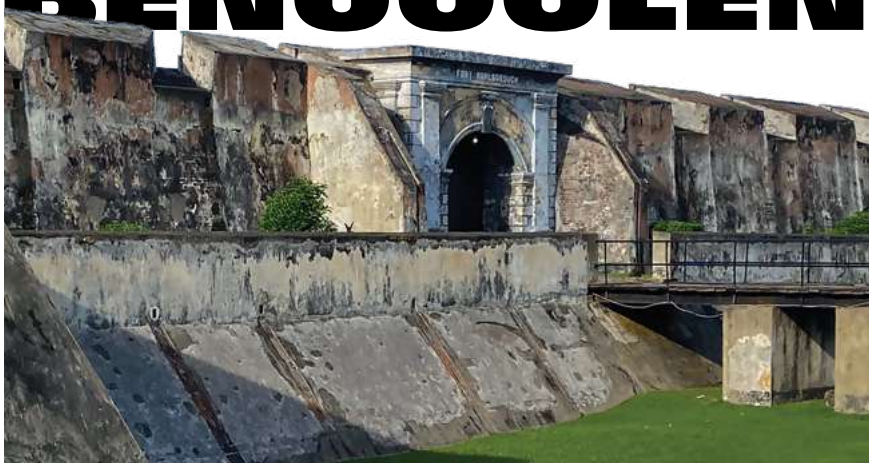
THE WATER CRISIS



"MEANWHILE, THE WATER CONSUMPTION PER CAPITA IS THE HIGHEST IN PENANG, COMPARED TO OTHER MALAYSIAN STATES, SHOWING HOW LOW WATER TARIFFS DRIVE HIGH WATER CONSUMPTION."

–HAJAR ARIFF
(IN "WATER IN PENANG")

PENANG MONTHLY

THE PENANG MONTHLY ENDEAVORS TO BE THE VOICE OF PENANG AND AN INSPIRING READ FOR THE CURIOUS MALAYSIAN. A PUBLICATION OF PENANG INSTITUTE, IT AIMS TO:

1. Supply Penangites with information about significant issues in order to promote public participation;
2. Encourage discussion about various aspects of Penang's fate and fortune;
3. Profile Penang personalities who have contributed, sometimes in very unassuming but critical ways, to the reputation and wellbeing of the state;
4. Put the spotlight on ordinary Penangites who otherwise go unnoticed, but who nevertheless define the culture of the state in essential ways;
5. Highlight the importance of Penang as a generator of culture, education, industry and cosmopolitan values;
6. Emphasise present trends in the arts, industry, politics and economics which affect the immediate future of the state and country; and
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By Azmi Hussin

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CLIMATE CHANGE

BY OOI KEE BENG

CLIMATE CHANGE. The phrase rings with an alliterative charm, yet it evokes a notion that is far from simple. It invites us to consider our relationship with the elements and the forces that govern our world.

A TIMELESS CONCERN

Before the advent of writing, it is difficult to pinpoint precisely what our ancestors understood about their environment. But we are awed by how ancient buildings and monuments, which have stood the test of time, often mapped and predicted cosmological and planetary movements. These early forms of knowledge, though less defined, reveal a deep human desire to comprehend the uncontrollable forces of nature.

With the emergence of writing, humans began systematically studying the ebbs and flows of natural elements. This knowledge became central to survival, offering insights into how to thrive in a world where so much remained beyond control. As understanding of the elements deepened, claiming such knowledge became a foundation for political and religious power. We identified elements—four or five depending on the tradition—and created mythologies and systems that explained the divine forces controlling these dynamics. Gods and demons were assigned roles over weather and climate, and humans developed rituals and practices to influence them.

Geomancy, astrology and religion were more formalised approaches for interpreting these forces, while less structured forms like clairvoyance, soothsaying and prophecy also played their roles. Yet, despite these efforts, humanity has never truly controlled the climate. Instead, we could only predict its patterns, adapting to its extremes through innovations like irrigation, shelters against storms and food preservation for bad harvests. When disasters struck, the blame often fell on gods or moral failings. In the end, all we could do was prepare, adapt and cultivate resilience.

Historically, we have always worried about the weather, but climate itself was less a focus—perhaps only becoming a proper concept in modern, scientific times. Seasonal changes were, in essence, climate changes that we could predict with relative accuracy, even if extreme weather often upset our expectations. Naming these changes as "seasons" probably gave us an exaggerated sense of being more knowledgeable than we were.

To be clear, the conversation today surrounding climate change is not about a loss of climate control.

> **"Climate change is not about the loss of control, but the limits of our understanding. The patterns we once relied on no longer apply, and nature's unpredictability is accelerating."**

Humans have never possessed such control. What we are witnessing is the breakdown of our millennia-old understanding of the patterns of nature. Our manipulation of Earth's resources has rendered the elements more unpredictable—in time, space and force—than ever before.

In simpler times, early humans relied on mobility to adapt to the whims of nature. They moved where food, water and safety could be found. The elements behaved as they always had, and we responded by adapting to them. But civilisation changed everything. Once humans settled, particularly in areas rich with water and other resources, it became necessary to mitigate the unpredictability of nature in the places where mobility was sacrificed. Being settled, staying in one place, meant that predicting the elements was no longer enough—we now became targets for other humans. We now had to defend ourselves from others competing for resources, and for agricultural products.

Fast forward to the 21st century, and our ability to manage nature's ebbs and flows has weakened dramatically. We face a crisis; the inevitability of wars over resources—clean water, clean air and food—looms large. The question now is whether civilisation can transcend itself and accept its subordinate role to nature's elements. Climate change is not about the loss of control, but the limits of our understanding. The patterns we once relied on no longer apply, and nature's unpredictability is accelerating.

Adapting becomes nearly impossible when changes are too frequent, too deep and too far-reaching.

So, where do we go from here? Globalisation, in its many forms over the last few centuries, has been about humanity discovering, competing and exploiting both the environment and each other. If we are to survive, we will have to transition from this model of conflict to one of cautious coexistence. Can global civilisation evolve to embrace a symbiotic relationship with our planet? Can we, standing at the edge of catastrophe, move beyond competition and embrace a future built on cooperation with each other and with the Earth?

CLEAN WATER UNDER THREAT

HIGHLIGHTING EMERGING POLLUTANTS IN MALAYSIA

BY **AHMAD ZAHARIN ARIS**

WATER IS THE most vital resource on Earth, covering approximately 71% of its surface. It is indispensable to the survival of all living organisms—approximately 60% of the human body is water. Agriculture, which feeds the world's population, consumes approximately 70% of all freshwater resources.

Access to clean water is not just a fundamental human right, but also a cornerstone of public health, economic stability and social development. Driven by population growth, industrial development and agricultural needs, global water demand is expected to increase by 20% to 30% by 2050; currently, more than two billion people worldwide already lack access to safely managed drinking water services, and approximately four billion people—nearly two-thirds of the global population—experience severe water scarcity for at least one month of the year.

ANTHROPOGENIC POLLUTION

Despite its fundamental importance, the quality of the world's water resources is increasingly threatened, particularly due to anthropogenic or human-induced activities such as industrial, agricultural and plastic pollution.

In Malaysia, industrial waste contributes significantly to water pollution and affects water quality. A prominent example of industrial pollution is the Sungai Kim Kim incident in March 2019, where the illegal dumping of toxic chemical wastes into a river in Johor led to a major environmental and public health crisis. Over 6,000 people, including school children, were affected by the toxic fumes released from polluted rivers and experienced symptoms such as breathing difficulties, vomiting and dizziness. This incident prompted the temporary closure of 111 schools in the Pasir Gudang area. The Sungai Kim Kim disaster highlights the urgent need for stricter enforcement of environmental regulations.

Agriculture, which accounts for approximately 70% of global freshwater usage, is a major source of water pollution. Fertilisers and pesticides used in farming often run into nearby water bodies, leading to nutrient pollution. This can cause harmful algal blooms that deplete oxygen in the water and kill aquatic organisms. In Malaysia, for example, the Sungai Kelantan runoff carries high levels of nitrates and phosphates, resulting in eutrophication, a process in which water bodies become enriched with nutrients, causing excessive algal growth. These blooms deplete the oxygen levels in water, leading to the death of fish and other aquatic organisms.

A GROWING PLASTIC CRISIS

Plastic pollution is a major environmental challenge. For decades, plastics have been hailed as powerful, versatile, durable and inexpensive. However, the qualities that have made plastic so ubiquitous have now turned it into a global environmental crisis. Malaysia generates approximately 1.52 million metric tonnes of plastic annually. As of 2023, Malaysia is ranked the third largest contributor to global ocean plastic pollution, highlighting the severity of its plastic waste management issues.

Plastic in water bodies not only harms marine life, but also breaks down into microplastics, which can infiltrate the food chain and pose risks to human health. These tiny plastic particles, less than 5mm in size carrying toxic chemicals and pollutants, have been found in the water we drink, the food we eat and even the air we breathe. The full extent of these risks is still being studied, but their potential for long-term harm is undeniable.

EDCS A HIDDEN THREAT

In recent years, endocrine-disrupting chemicals (EDCs) associated with microplastics have emerged as an alarming class of pollutants. EDCs are synthetic or natural compounds that interfere with the endocrine system; they mimic or block hormones, leading to adverse health effects in wildlife and humans.

In Malaysia, EDCs are an emerging concern, particularly because they often hitch on microplastics and infiltrate water bodies across the country. EDCs are found in various products and processes, including industrial chemicals (e.g. Per- and polyfluoroalkyl substances (PFAS), pesticides, pharmaceuticals and personal care products. These chemicals enter the environment via industrial discharge, agricultural runoff and household waste. The heavy use of pesticides in agriculture and the presence of industrial areas near water bodies in Malaysia increase the risk of EDC contamination.

EDCs can have profound effects on animal hormonal systems, leading to disruptions in sex development and reproductive functions. In many aquatic environments, male fish have been found to exhibit female characteristics owing to exposure to EDCs. In rivers in the UK, male fish exposed to EDCs with oestrogenic compounds have developed intersex conditions, where they produce eggs in their testes—a condition typically found only in female fish. This feminisation reduces the fertility and reproductive success of the affected male fish, threatening population stability.

Furthermore, EDCs have been linked to a range of health issues, including reproductive disorders, developmental problems in children and increased risk of cancer. With microplastics found in drinking water and seafood, Malaysians are at risk of chronic exposure to these harmful chemicals. This is particularly concerning here, where seafood is a major part of the diet.

WHAT CAN WE DO?

The escalating presence of microplastics and EDCs in Malaysia's water bodies is not just an environmental concern; it is a crisis that threatens the fabric of our ecosystems and public health. As these pollutants permeate rivers, lakes and oceans, repercussions are felt across the board, from disrupted wildlife populations to contaminated food supplies and increased long-term health risks for Malaysians.

Given the severity of this situation, apart from strengthening policies and regulations by the government, it is imperative that we take immediate and comprehensive actions:

ENHANCING PUBLIC AWARENESS

Educating the public about the dangers of microplastics and EDCs is crucial. Awareness campaigns can drive more responsible consumer behaviour, reduce plastic consumption and foster support for stronger environmental policies.

PROMOTING SUSTAINABLE ALTERNATIVES

It is essential to rethink our relationship with plastics and embrace innovative, sustainable solutions that go beyond the short-term convenience plastics provide. This includes investing in the research and development of biodegradable materials and improving waste management systems to prevent plastics from reaching waterways.

As Malaysia charts its course towards sustainable development, tackling the threat of microplastics and EDCs must be at the forefront of our efforts. The challenge is immense. From oceans to landfills, plastic waste is accumulating at an alarming rate, and it is up to each of us to rethink our habits, demand better policies and support sustainable practices. It starts with you, within you and from you.

PROF. DR. AHMAD ZAHARIN ARIS' research focuses on hydrochemistry, environmental chemistry and environmental forensics, among others. His work has won many awards and is pioneer to methods used in environmental policies and guidelines, both locally and internationally.

SECURE WATER SUPPLY

BY
ZULFIGAR YASIN
AND
HAJAR ARIFF

SECURE FUTURE FOR PENANG

IN THE LUSH landscape of Penang, where the balance between urban expansion and nature conservation is delicately poised, the issue of water security has emerged as a critical challenge. Known for its bustling industries, historic architecture and food scenes, Penang now faces a significant threat—water is running scarce.

The National Water Services Commission (SPAN) Chairman, Charles Santiago, recently highlighted the gravity of the situation at a press conference. Several Malaysian dams, including Penang's Mengkuang Dam, have been in "a state of distress"—relying on only one water source makes them much more vulnerable to water disruptions. Moreover, over one-third of these dams are more than 50 years old, making them susceptible to operational failures.

Penang, alongside other states like Perlis, Melaka and Negeri Sembilan, is considered water-poor due to its limited natural freshwater resources. This scarcity is exacerbated notably by the dwindling water resources at Sungai Muda, Penang's main source of raw water, which has seen a 7% drop in water levels—a stark indicator of the challenges posed by the changing climate.

The federal government's response is the ambitious Water Sector Transformation 2040 (WST 2040). This initiative aims to address water scarcity and transform the water sector into a profitable component of the national economy. Modernising water infrastructure with the latest digital technologies is a cornerstone of this plan, but it will require significant political will and strategic investment to achieve.

APPROACHES TO WATER SECURITY IN PENANG

Innovative solutions are being considered to bolster Penang's water reserves. One such solution is the development of off-river storage (ORS) facilities similar to the one in Rasau, Selangor, which was repurposed from an abandoned tin mine. These facilities are designed to collect and store water during rainy seasons, which can then be treated and supplied during drier periods.

In Penang, where water resources are both precious and precarious, water security is a pressing concern that permeates every facet of life. With climate change and ageing infrastructure threatening the continuity of its water supply, Penang is pioneering innovative strategies aimed at ensuring that every drop counts. These efforts are concentrated around three key approaches: increasing water supply, reducing water usage and reusing grey water.

One of Penang's primary strategies involves augmenting its existing water resources. This includes the construction and expansion of dams and reservoirs, as well as exploring alternative water sources. By broadening its water source spectrum, Penang aims to cushion itself against the variability of rainfall and river water levels, which are being significantly impacted by erratic weather patterns.

Water conservation is another pillar in Penang's strategy. The state is intensifying efforts to educate its populace on the importance of water conservation through public campaigns and school programmes. These initiatives are designed to instil a culture of water efficiency in households and industries alike.

The government is also implementing stricter regulations and incentives for water-saving technologies in both residential and commercial sectors, encouraging the adoption of fixtures that use less water and the practice of water-efficient methods in industries, particularly those that are water-intensive.

The reuse of grey water represents a pivotal shift towards sustainable water management in Penang. Grey water, which includes water from baths, showers and sinks, is being treated and repurposed for non-potable uses such as gardening, farming and even industrial processes. This not only reduces the demand for primary water supply, but also promotes a circular approach to water usage, which is essential in minimising environmental impact. This approach is still in its infancy, but the buy-in to water conservation is increasingly positive.

THE MUDA RIVER CATCHMENT AREA

As Penang progresses toward becoming a high-income economy, the management of its primary water source—the Muda River—plays a pivotal role. Spanning 4,119.76km^2 and stretching approximately 180km, the Muda River Catchment Area is vital for both household and industrial use, and is crucial to the prosperity and sustainability of Kedah and Penang.

The river is not just a water supply, but also a sensitive ecological zone. It has suffered from illegal logging and expansive agricultural projects, like the development of large plantations in the Gunung Inas Forest Reserve near Baling. This has increased soil erosion, elevated the risk of mudslides and led to severe flooding. Such floods displaced more than 3,000 people in July 2022.

Further downstream, these ecological catastrophes pose a significant threat to the river's capacity. The Muda

> "PENANG FACES A SIGNIFICANT WATER SECURITY CHALLENGE MARKED BY HIGH DOMESTIC CONSUMPTION AND LOW WATER TARIFFS... THIS RATE IS HIGHER THAN MALAYSIA'S NATIONAL AVERAGE, HIGHLIGHTING PENANG'S CONSIDERABLY HIGHER WATER USAGE COMPARED TO NATIONAL AND REGIONAL BENCHMARKS."

River, shared by Penang and Kedah, is expected to meet Penang's water demands up to 2025. This highlights the urgent need for alternative water sources and the application of more robust management strategies.

The Muda River is regulated by two main dams. The Muda Dam, mainly used for paddy irrigation, has a limited capacity of 160 million m^3, and relies on transferring water to the larger Pedu Dam via the 6.8km Saiong Tunnel. The Beris Dam, managed by the Department of Irrigation and Drainage, with a capacity of 114 million m^3, supports agricultural and domestic needs in Kedah. Its network feeds into various intake stations like Padang Serai, Sidam Kiri and Kota II, managing flows from 1 to 5m^3/s, and is key to sustaining Kedah's agricultural productivity and water supply.

Addressing the needs of a denser urban population presents unique challenges. The Penang Water Supply Corporation (PBAPP) heavily draws from the Muda River further downstream, especially at the Bumbung Lima station, where the flow is 12.7m^3/s. This substantial reliance underscores the river's role in supporting the escalating water needs of Penang's urban areas. Now, the river supports nearly 80% of Penang's water needs.

The Muda River is more than a geographical feature; it is a lifeline for both Kedah and Penang. Protecting its health and sustainability through comprehensive planning, conservation efforts and cooperative water management is essential for maintaining a balanced and sustainable water supply, which is crucial for both Penang and Kedah's future economic stability.

PENANG WATER INFRASTRUCTURE

Penang's water infrastructure—anchored by the Air Itam Dam, Teluk Bahang Dam and the Expanded Mengkuang Dam (EMD)—is a cornerstone of its strategy for water security. The Air Itam Dam, with a capacity of 2.2 billion litres, and the Teluk Bahang Dam, holding up to 18.2 billion litres, are critical in ensuring consistent water supply to the state. These "daily dams" are directly connected to multiple water treatment plants, making them essential for Penang's daily water needs. However, it is the EMD, with an expanded capacity of 86.4 billion litres, that truly reflects Penang's commitment to long-term water sustainability. As a strategic drought reserve, the EMD provides vital support during periods of low water intake from the Muda River.

As we have seen between January and June 2023, the effective capacities of these three dams have declined significantly. The Air Itam Dam dropped to 53%, while the Teluk Bahang Dam fell to 45%. Despite these downward trends, the EMD maintained a higher capacity of 88%, showcasing its role as a buffer during dry periods. The decline in capacities of the Air Itam and Teluk Bahang Dams is largely due to reduced rainfall in their water catchment areas, which has been ongoing since 2022, and is probably exacerbated by broader climate change effects.

The reduced rainfall in these water catchment areas during early 2023 was notably severe. In the Air Itam Dam water catchment area, rainfall totalled only 342mm over the first five months, which is 60% lower than its five-year average. Similarly, the Teluk Bahang Dam water catchment area recorded at just 723mm, marking a 50% drop. This drastic decrease in rainfall not only challenges water resource management, but also underscores the urgency for Penang to adapt to the changing climate conditions.

HIGH-WATER DEMAND AND LOW WATER TARIFFS IN PENANG

Penang faces a significant water security challenge marked by high domestic consumption and low water tariffs—a trend that has persisted since PBAPP's corporatisation in 1999. Over the last 23 years, water consumption has surged by 62%, from 536 million litres per day (MLD) in 1999 to reach 876 MLD by early 2023.

This increase is primarily driven by domestic use, which accounted for 62% of total consumption in the state. Notably, the per capita domestic water use rose from 255 litres per capita per day (LCD) in 1999 to 307 LCD in 2022—a 20% increase. This rate is higher than Malaysia's national average, highlighting Penang's considerably higher water usage compared to national and regional benchmarks.

Indeed, domestic consumers in Penang use more water collectively than all the factories, hotels, shopping malls, restaurants and government offices combined, emphasising the critical nature of residential water use in the state's overall consumption profile.

One key factor driving the high domestic water consumption in Penang is its relatively low water tariff. For domestic usage up to 35,000L per month, the rate stands at RM0.86/m^3, one of the lowest in Malaysia, and higher only than in Terengganu. For non-domestic consumption above this threshold, the rate increases to RM2.17/m^3, which remains lower than rates in other highly urbanised states like Johor, KL and Selangor. These affordable rates have made water widely accessible, but have also inadvertently promoted higher usage.

In response to the need for more sustainable water management, Penang's authorities revised these tariffs effective from February 2024. PBAPP has implemented new rates that comply with federal instructions. Under the new tariff structure, domestic users consuming up to 20,000L per month now pay RM0.62/m^3, and non-domestic users up to 35,000L per month are charged RM1.57/m^3. Although these adjustments aim to strike a balance between making water accesble and encouraging conservation, they still position Penang as a state with relatively low water tariffs, continuing the challenge of managing high consumption.

In 2023, Penang's water supply statistics against national benchmarks highlighted several key aspects of the state's water management. Penang boasts higher urban and rural population service rates at 100% and 99.8% respectively, surpassing the national averages.

Penang also records a Non-Revenue Water (NRW) rate of 26.8%, performing better than the national average of 34.4%. NRW refers to water that has been produced but is lost before it reaches consumers due to leaks, theft or metering inaccuracies. Although Penang's NRW rate is better than the national average, reducing these losses can offer multiple benefits, including financial savings from increased water sales, improved water system knowledge, enhanced firefighting capabilities due to better water pressure, minimised property damage and reduced risk of contamination.

Additionally, Penang maintains a significantly higher treated water reserve margin compared to the national average, indicating robust reserve capacity. Despite these positives, Penang experiences more unscheduled interruptions and a higher number of complaints related to burst pipes than the national average.

This analysis underscores areas where Penang excels and where it requires focused improvement.

Forecasts indicate an escalating demand for daily treated water in Penang, with projections rising from 1,178 MLD in 2022 and reaching 2,178 MLD by 2050. This expected increase presents significant challenges, particularly given the high per capita domestic water use. This disparity emphasises the urgent need for Penang to implement strategies to reduce domestic water consumption, and manage future supply more effectively and ensure sustainability.

Water is not just a resource; it is the essence of life, for as one poet puts it, "…thousands have lived without love, not one without water."

PROF. DATO' DR. ZULFIGAR YASIN is a marine environmental scientist who is an Honourable Professor at Universiti Sains Malaysia and a Visiting Senior Analyst at Penang Institute. His work now focuses on the sustainable development of the marine environment.

HAJAR ARIFF graduated from Universiti Tun Hussein Onn Malaysia (UTHM) with a Bachelor of Science (Hons) in Industrial Statistics. She is an introvert who lends her time to activism whenever the need calls.

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REUSING WASTE WATER

THE FUTURE OF SUSTAINABLE WATER MANAGEMENT IN MALAYSIA

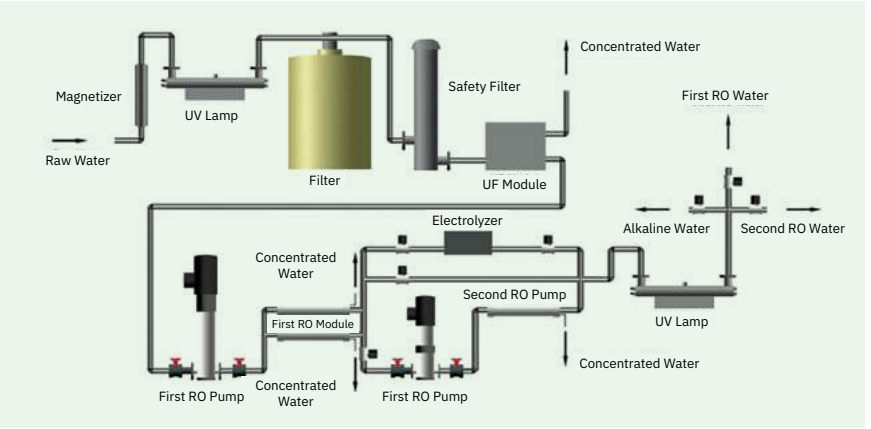
OUR INDUSTRIES ARE key drivers of Malaysia's economic growth, but they also create a significant demand for water. This demand raises pressing concerns about the sustainability of our freshwater sources, and traditional reliance on rivers and groundwater is no longer sufficient to meet the increasing need.

BY JARED LOO

JARED LOO is the managing director at Terasek E Hydra. He is committed to providing communities and industries with cost-effective and innovative solutions that contribute to resource optimisation.

CAPTIONS

1. Water reclaim process in Malaysia.
2. Reverse osmosis technology filtering system.



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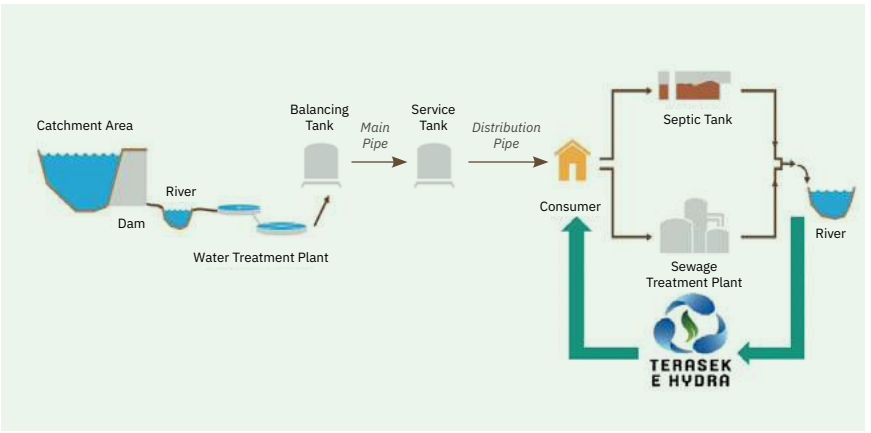


2

This challenge presents us with an opportunity. By leveraging advanced treatment technologies, we can turn this often-overlooked resource into a valuable asset. Treated wastewater, when properly processed, can be a reliable water source. With growing demands for water in agriculture, industry and daily consumption, reclaiming treated wastewater helps preserve essential freshwater sources for critical uses, such as for drinking and food production.

Unlike freshwater sources, which can be depleted or disrupted during droughts, reclaimed water offers a reliable alternative, particularly for industrial uses. This makes wastewater treatment crucial, especially in regions prone to periods of scarcity or climatic uncertainty.

Reusing wastewater also plays a vital role in environmental protection. When wastewater is treated and reused instead of being discharged into rivers and lakes, pollution is reduced and this helps safeguard aquatic ecosystems.

A PATH FORWARD FOR MALAYSIA

A robust wastewater reclamation programme can significantly enhance Malaysia's water security. By embracing a circular economy approach—minimising waste, reusing materials and recycling resources—we can maximise the value of our water supply; wastewater reclamation aligns perfectly with this principle, transforming what was once considered waste into a valuable resource.

In fact, such an initiative has already been implemented in Malaysia. Terasek E Hydra's pilot plant in Shah Alam treats sewage water using membrane technology, transforming it into usable water for various industries. In Penang, the state-owned company responsible for water supply services in the state, Perbadanan Bekalan Air Pulau Pinang (PBAPP), has also signed an MoU with Indah Water Konsortium to study the viability of recycling sewage water for industrial re-use in March 2023.

That being said, the success of this initiative depends on overcoming technical hurdles and addressing public perceptions around reusing treated wastewater. If implemented effectively, Malaysia's wastewater reuse programme could serve as a model for other nations looking to adopt sustainable water management practices.

Of course, this is not the only solution for sustainable water management, but one of many. Industries should still focus on water-efficient technologies and processes within their production lines, while at an individual level, each of us can practise simple water conservation habits in our daily lives. Factories can also explore their own closed-loop systems that allow for water to be recycled and reused. And as consumers, we can pressure industries to do better by choosing products from companies that prioritise sustainability in their standard operating procedures.

This journey toward sustainable water management requires collective action and a shift in mindset. With innovative thinking and willpower, we can ensure that our industries thrive while securing a sustainable water future.

WATER SECURITY IS EVERYONE'S RESPONSIBILITY

BY ONG SIOU WOON

ONG SIOU WOON
20 years (and counting) in Penang, and more than a decade with Penang Institute—she is a YSEALI alumnus trained in urban planning. She finds learning about nature and food a never-ending journey.

"WE LIVE IN an age of swirling crises—economic crisis, energy crisis, food security crisis. What are the chances of a water crisis in the near future? And are we prepared to make the tough choices?" I wrote these words 12 years ago in *Penang Monthly*, discussing water security in Penang. After 12 years, the water supply challenge has become even more pressing. No longer can we depend only on the water utility distributor for our water security. Concerted public effort in saving water will buy time for authorities to establish other alternatives.

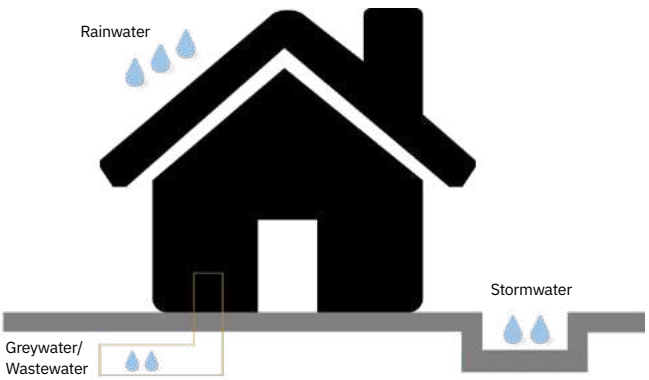
Only 2.5% of all water on earth is fresh water. Approximately 99.7% of it is trapped in glaciers, in the ground (or aquifer) or is frozen. The remaining 0.3% is found in lakes, rivers and streams on the surface of the planet. However, not all of this accessible fresh water is consumable. It is also not equally distributed throughout the world. Climate change is also making it harder to manage water resources.

CONSUMPTION PATTERN

Why can't water security issues be solved by the government or the water distributor? This may seem like an easy problem to address—but no. In fact, it involves everyone, and we, the consumers, are wasting precious processed potable water. According to the United Nations (UN), it is a basic human right to have access to sufficient water continuously for personal and domestic uses, which include drinking, personal sanitation, food preparation, and personal and household hygiene. Sufficient would mean having access to 50 to 100L of water per person per day. Referencing the World Health Organisation (WHO), in the event of humanitarian emergencies, the minimum is 15L per person per day.[1] However, this may be reduced to 7.5L, with the remaining water supplied untreated for other uses.[2]

Published records show Penang's domestic water consumption to be at 284 litres per capita per day (LCD) in 2023, notably higher than the national average of 237 LCD and double that of Singapore's average of 141 LCD; the UN benchmark is set at 165 LCD.[3][4] If I compare the average Penangite's consumption of 284 LCD to my own home's consumption averaging at 90 LCD based on the last 12 months' billing record, the difference of 194L of water every day can allow me to take an extra five-minute long shower (about 75-90L) plus a full bath (about 80L) and I will still need to fill the gap of excess water to consume every day. According to the Penang Water Supply Corporation's (PBAPP) Annual Reports, water consumption per capita has increased from 255 LCD in 1999 to peak at 308 LCD in 2021. The culture of excessive water consumption is one Penang heritage trait that must change.

If your LCD is above UN's average, then it is highly recommended for you to check for leaks in your house. One drip of water leaked from a faucet every minute will accumulate to approximately 10.8L of water in a month.[5] Are we using too much water? Or are we simply ignoring small leaks?



1

WATER SOURCE AVAILABILITY

Penang is surrounded by water—sea water—which costs at least three times the cost to process fresh water. We also have rainy seasons that can be so intense they cause flash floods. Then, that is followed by a long dry spell, necessitating cloud seeding, often with the hope that it causes rain at the right water catchment area.

Naturally, people will ask, "Can't you increase the water catchment area? Or harvest the rainwater?"

Expanding the water catchment area is no easy feat because the location must have rainfall data collected over 30 to 50 years to demonstrate that even during dry seasons, the area still receives rainfall. Climate change adds another layer of difficulty. While September 2024 saw consistent rain, Teluk Bahang Dam's capacity remains low at 37%, compared to Air Itam Dam (75.7%) and Mengkuang Dam (89.9%).[6] Chances are high that the water catchment area that leads to the Teluk Bahang Dam did not receive as much rainfall over it, compared to the tarred and concreted side of the island.

Interestingly, PBAPP is now harvesting rainwater to support water treatment at the Air Itam Water Treatment Plant (WTP). The rainwater was collected from its own premise only because PBAPP cannot vouch for the quality of rainwater harvested elsewhere. In fact, rainwater quality is one of the key concerns for large-scale rainwater harvesting to be practical for cost-effective treatment. Therefore, in the interest of production cost, large-scale rainwater harvesting, similar to that of stormwater harvesting, will possibly be one water source option in the far future. I say far future because it requires high civic mindedness from every resident and visitor to make it work.

Small-scale rainwater harvesting will be practical for industrial, commercial or institutional buildings. The water can be used for gardening and/or cooling systems. This can be applied to landed homes as well. However, it once again boils down to consumers—will we initiate the installation of rainwater harvesting systems at our own premises to reduce the consumption of treated water for non-potable usages?

PBAPP is exploring the feasibility of wastewater recycling with Indah Water Konsortium (IWK), aiming to recycle wastewater at their plants for industrial reuse—unlike Singapore or the Netherlands, where wastewater recycling is meant for potable consumption (read: production cost is similar to that of desalination plants, i.e. three times higher than the current production cost). Even so, the bigger question will be how much the industrial consumers are willing to pay for recycled water, taking into account not only the cost of recycling water, but also the infrastructure to supply the recycled water to the factories, followed by the internal water reticulation upgrade into a dual water system.

THE RIGHT PRICE

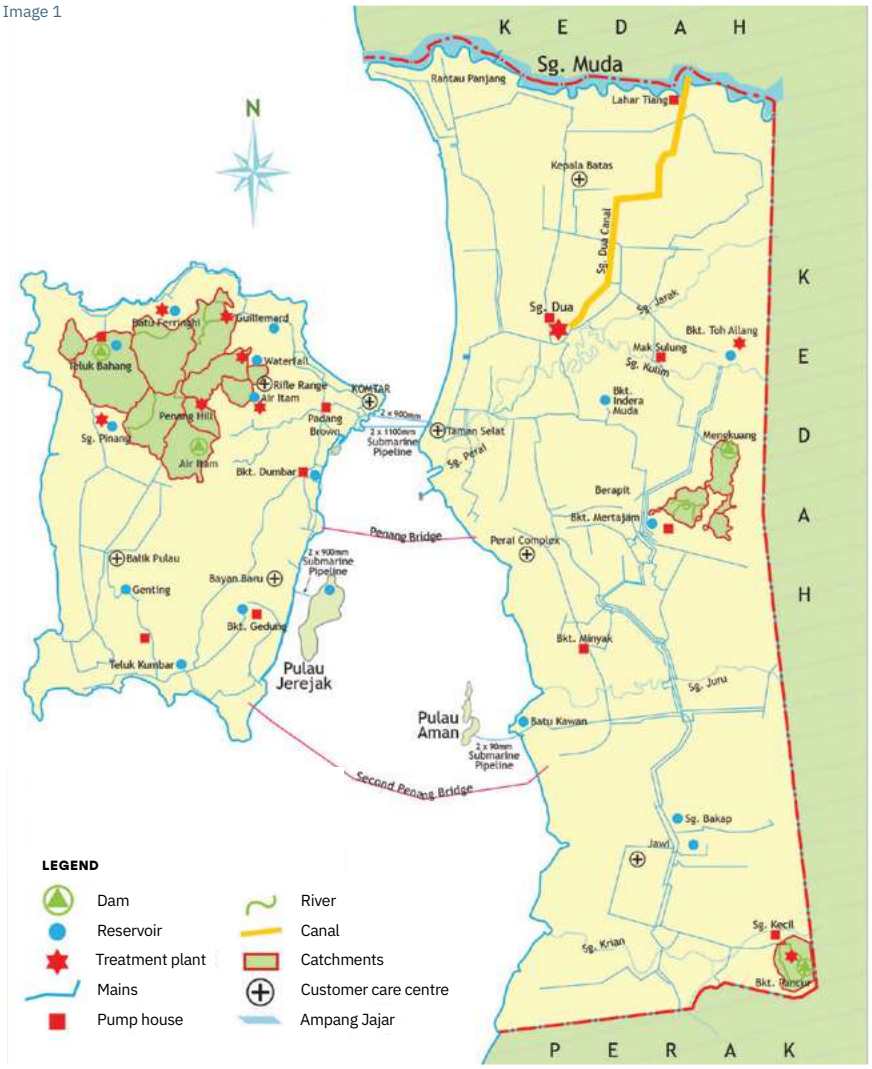
Water is free, but the system to process and distribute is not. You can't drink seawater or water from a stream (not in Penang, at least—think pollution from bulk waste disposed, illegal industrial waste dumping, residue from fertiliser, naturally present bacteria and microorganisms). The water needs to be treated, and therefore a fee must be paid for this service. So, what will be the right price to pay for treated water? This is probably one of the million-dollar questions that nobody can get right.

In Malaysia, tariffs are often structured by category (e.g. domestic, commercial, industrial, etc.) and by consumption block. It is also very common to see that tariffs for domestic consumption are subsidised in countries worldwide. However, studies by the UN[7] and the World Bank over the decades have shown that these subsidies are disproportionately benefitting the better-off[8] simply because some of the poorer ones are either not connected to the utility, or for a few real cases in Penang, they have larger family sizes where the accumulated bill per house tends to land them in the higher tier of water consumption tariffs.

Therefore, many would suggest for such subsidies to be targeted instead of being built into the tariff itself. Looking at the recent water tariff review in Penang, it does not seem like the general public has taken to the tariff review well. It was at first met with public complaints and resistance from state officials.[9]

Further delays in adjusting tariffs to reflect true production costs risk a larger future increase. The cost of water treatment is rising due to water scarcity, new technologies like dissolved air flotation, aging infrastructure upgrades and increasing treatment capacity at plants. While subsidies can offer temporary relief, the water authority cannot indefinitely absorb rising costs linked to climate change, pollution and employee wages. Eventually, we will all need to share the burden.

Image 1



WATER PROVISION

Current water facilities rely very much on the northern side of Penang. Referring to the water infrastructure map (Image 1) from PBAPP's website,[10] it is clear that water catchment for Penang Island and its corresponding water treatment plants are geographically located at the Northwest quadrant of the island, supplying to consumers geographically located within the same region (refer to Map 1, areas shaded in white). Meanwhile, the Sungai Dua WTP, located at Seberang Perai Utara, is supplying to approximately 590,000 consumers,[11] or 85.5% of all registered water consumers in Penang, covering the remaining southern quadrant of Penang Island and George Town, as well as almost all consumers in Seberang Perai (refer to Map 1 & Map 2, areas shaded in pink). The remaining three WTPs in Seberang Perai, Bukit Toh Allang and Bukit Panchor serve a smaller geographical region. Alternative water sources from the southern part of the state need to be established to alleviate consumer anxiety and disruptions caused by incidents at the Sungai Dua WTP, particularly for areas located far from the distribution source.

The Perak-Penang Water Project, with its expected completion in 2030, will be the second major water resource. However, it is at least five more years to its completion, and the challenge will still persist. Simple gestures from consumers to reduce consumption, to fix leaks or to install water saving devices including rainwater harvesting systems, can help ease the current water stress. A small 10% saving per day per person can save 87.7 million litres of water (which can fill up 35.08 Olympic-size swimming pools).

Until then, it will require all of society to work together for continued water supply in our taps for as long as possible. We may have other types of water challenges ahead of us, but if we do nothing now, our days with water from our faucets will be numbered.

LEGEND

Pipeline

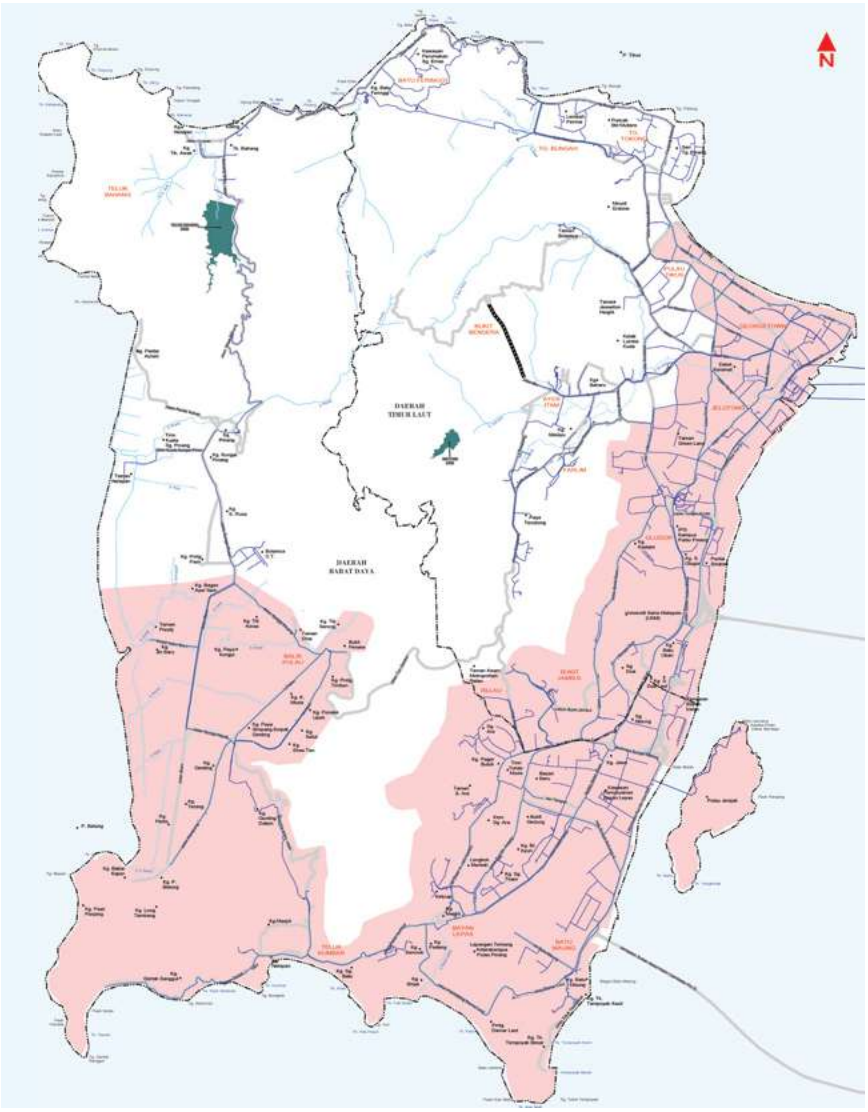
River

Road

Affected Area
(247,806 accounts affected)

Non-affected Area
(87,435 accounts not affected)

Map 1



Source: PBAPP Media Release dated 8 December 2023

FOOTNOTES

[1] https://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_media_brief.pdf

[2] https://www.who.int/teams/environment-climate-change-and-health/water-sanitation-and-health/environmental-health-in-emergencies/humanitarian-emergencies

[3] https://sdgs.un.org/basic-page/malaysia-34130

[4] https://www.malaymail.com/news/malaysia/2024/07/27/penang-utility-company-urges-using-10pc-less-water-till-september-rainy-season-to-avoid-crisis/145120#:~:text=It%20said%20Penang's%20per%20capita,consumed%20per%20capita%20in%20Singapore.

[5] https://water.usgs.gov/edu/activity-drip.html

[6] Retrieved from https://pba.com.my/penang-dams-effective-capacity/ on 14 October 2024

[7] https://www.un.org/esa/sustdev/publications/water_tariffs.pdf

[8] https://www.worldbank.org/en/news/press-release/2019/08/28/water-and-sanitation-subsidies-need-to-better-benefit-the-poor-says-new-world-bank-report

[9] https://www.thestar.com.my/news/nation/2024/06/05/penangites-waking-up-to-higher-water-bill-reality

[10] https://pba.com.my/penang-water-supply-statistics-infrastructure/

[11] https://pba.com.my/pdf/news/2023/08122023_PBAPP_Jan2024-Scheduled-Water-Supply-Interruption-v3.pdf

Map 2

LEGEND

Mains

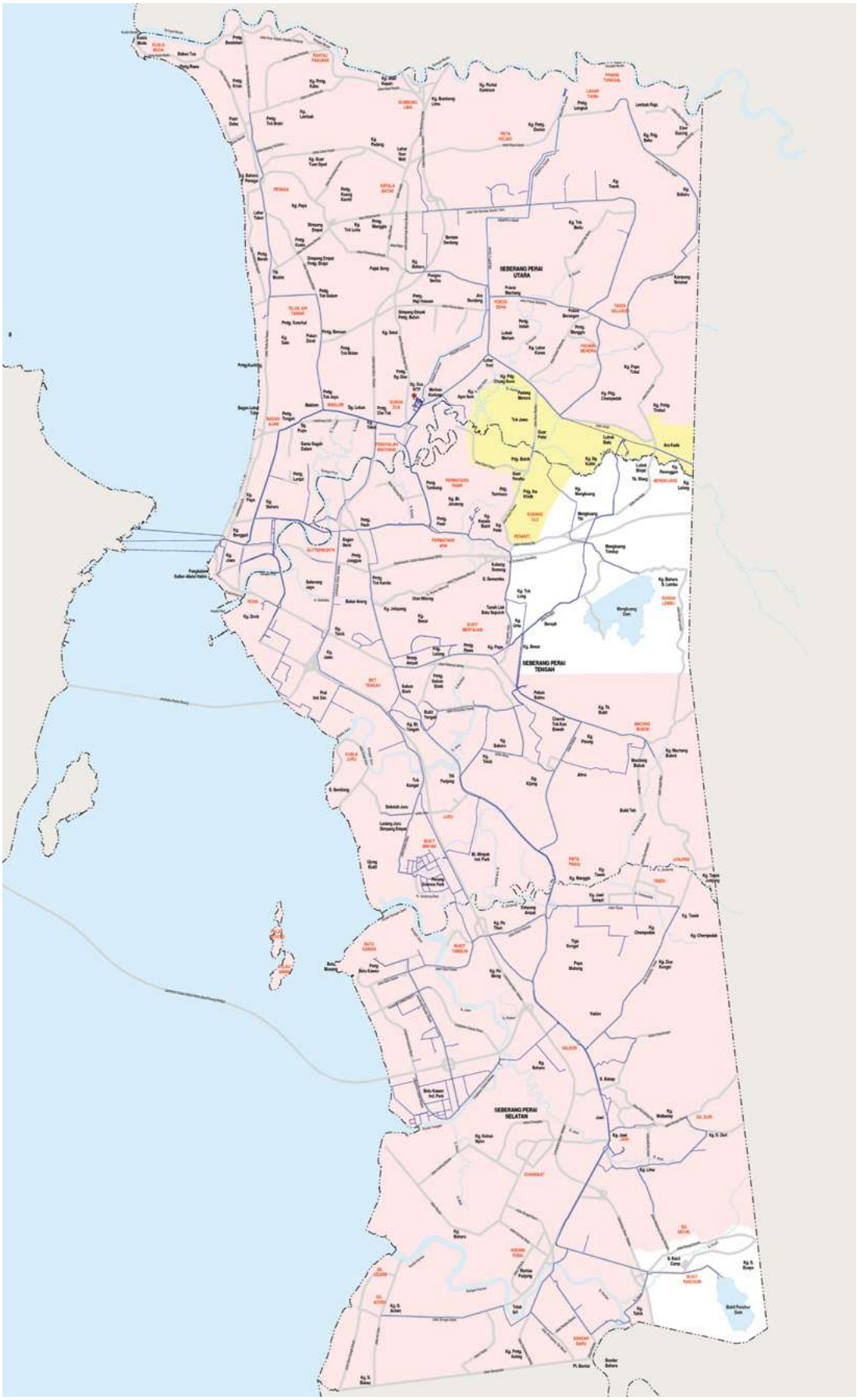
Roads/Highways

River/Sea/Canal/Dam

Non-affected Area (7,104 accounts not affected)

Low Pressure Affected Area (6,950 accounts affected)

Affected Area (334,884 accounts affected)



Source: PBAPP Media Release dated 8 December 2023

CAPTION

1. Difference between greywater and stormwater harvesting.

PBAPP TAKES ON THE DIFFICULT TASK OF SECURING WATER FOR THE FUTURE

BY RACHEL YEOH

RECENT WATER SUPPLY disruptions in Penang have left locals shaken, and questions about water security have become the talk of the town. However, the state's water authority, Perbadanan Bekalan Air Pulau Pinang (PBAPP), is confident in the strategies they have laid out to ensure taps do not run dry in the long run. *Penang Monthly* sits down with PBAPP's CEO, Pathmanathan K, to look into the actions and projects PBAPP has and is currently undertaking.

Rachel Yeoh: Good evening Dato' Pathmanathan. Cutting right to the chase, can you share PBAPP's journey and what you aim to achieve as its CEO today?

Pathmanathan K: On 8 November 2022, I was appointed as the CEO of PBAPP and our holdings company, PBA Holdings Bhd. Before my appointment, two prominent predecessors contributed to the achievements of PBAPP—Liew Chook San and Jaseni Maidinsa—which included obtaining ISO accreditation, initiating the protection of 62.9km^2 of our water catchment area and guiding Penang through the migration to the National Water Services Restructuring Initiative (NWSRI) in 2011.

Since 2007, PBAPP has also operated the Penang Water Services Academy (PWSA) to promote competency and skills development in the water industry. We want to make sure that our staff are skilled. In 2017, PBAPP set up a PBAPP Central Laboratory that has received the IKM Excellence Awards for seven consecutive years. The year after, we launched the Water Supply Command Centre to monitor water supply efficiency in Penang. It allows us to remotely detect leakage and low pressure in the system. Those cover the main pipes, not the smaller ones.

When it comes to championing protection, we have highlighted the importance of protecting and conserving the Sungai Muda River Basin, which includes the water catchment area of the Greater Ulu Muda Forest Complex in Kedah. There is also the Northern Corridor Economic Region (NCER), consisting of Perlis, Kedah, Penang and Perak.

I am committed to upholding the water supply legacies of the past as well as supporting Penang's socioeconomic aspirations for the future. Expectation from consumers is very high, and Penang is a water-stressed state. It's no joke. Our catchment area is insufficient—estimated to cover below 10% of the state area, while consumption is high. We are facing many challenges, climate change being one of them, and the ever-increasing water consumption, too. And yet, today, PBAPP is supplying more water than ever before in the history of Penang to support the rapid socioeconomic growth.

Because we supply water 24/7, our workers and I work 24/7 to deliver these services. During a recent chat with the former CEOs, they reminded me that as a Penang water supply engineer, I should remain committed to doing the right thing, even when these are unpopular.

RY: **PBAPP plays a vital role in water supply management. What strategies do you have in mind to address Penang's water supply challenges, considering the growing population and the changing environmental conditions?**

PK: Penang's land size and raw water resources are limited—we only have one existing raw water resource, Sungai Muda. In recent years, we have seen an increase in per capita domestic consumption. In 2023, the per capita domestic consumption statistic for Penang was 284 litres per capita per day (LCD). The national average, as reported in 2022, was 237 LCD; Singapore reported a figure of 141 LCD for 2023.

Climate change is also a factor. Rainfall can be unpredictable—we can suffer heat waves or too much rain, followed by a dry spell.

The water demand projection for Penang is 1,532 megalitres per day (MLD) in 2030, and it will rise to about 1,880 MLD in 2040 and 2,178 MLD in 2050.

We are thankful that the federal government has approved the RM4.5bil Perak-Penang Water Project. However, this project is likely to be operational only from 2030. There is also mention of desalination—we need to factor in the various costs, the capital expenditure and the operation cost. It can be 300% or 400% more than what we are paying now.

RY: **So plans for desalination will continue despite the cost?**

PK: I think that PBAPP will eventually have to venture into desalination in the future. We are exploring the viability of a project to generate about 260 MLD of desalinated water in the future. We will appoint a consultant to carry out a feasibility study. We are also looking into water recycling in Penang. In March 2023, we signed a memorandum of understanding (MOU) with Indah Water Konsortium (IWK). We identified three Sewage Treatment Plants (STPs) in Jelutong, Mak Mandin and Bayan Baru. If we can recycle the water from these STPs, we can produce 260 MLD of recycled water, which may be supplied to the industrial area.

As for challenges... When you look at Penang Island, we have two dams, Ayer Itam and Teluk Bahang. Ayer Itam is very small—2,000 million litres. As it is, I need to extract 1,200 million litres of water from Sungai Muda per day, this means Air Itam Dam reserve can only last one and a half days! Teluk Bahang Dam, with a capacity of 18,400 million litres can only last 15 days. The best and biggest we have is Mengkuang Dam—at 86,000 million litres, it can last 84 days. However, the Mengkuang pipeline is limited. To supply to the whole state, we need to spend another RM100mil to lay new pipelines.

RY: **With regards to Sungai Muda and Sungai Perak, do you mind sharing your next move on the chessboard to navigate this?**

PK: The Sungai Muda Water Circuit 1973 consists of a 14km canal, the Sungai Dua water treatment plant (WTP) and the First Penang Twin Submarine Pipelines to supply water to the island. We have been depending on the same source since 1973. The resources are getting limited as we are sharing between two states. We also need to secure the Ulu Muda basin. When the catchment is not there, it is difficult for us to maintain the water level.

Our Chairman, Chow Kon Yeow, has directed that PBAPP move forward by implementing water projects that ensure water sufficiency until 2030. We are expected to deliver the right result on time.

We ensure that water catchment is secured in Sungai Muda. This is why we proposed UMBA (Ulu Muda Basin Authority). Currently, the authority is PLSM (Pengurusan Lembangan Sungai Muda) and they get their directive from

Lembangan Sumber Air Negeri Kedah (LSANK) under the Kedah Menteri Besar. PLSM is a federal body and LSANK is a state body. The dam is under LSANK. They have to get directives from LSANK to release the water.

Now, the two issues with Sungai Muda—the Baling flood and the faulty barrage gate—were very valuable lessons. Mengkuang Dam can release only 300 MLD, 30%. If anything happens to the river, we can only operate 30% of the Sungai Dua WTP. After the incident, we increased the water supply from Mengkuang to the Sungai Dua WTP to 600 MLD, which is 60% of its capacity.

Another proposal to the federal government is TAPS, an off-river storage facility. We recommended that they consider another 1,000 to 2,000 million litres of water storage facilities just next to our Lahar Tiang intake. If anything happens to the river, we can still tap into this one-day storage. Now, I have two options: to tap more water from Mengkuang Dam or utilise off-river storage facilities.

Now, the third is the Sungai Perak Raw Water Scheme, which is out of the chessboard because now we are talking about treated water. This is the RM4bil project I mentioned earlier, and this is under the purview of the Perak state government. Currently, PBAPP's concern is on the Water Contingency Plan 2030 (WCP 2030); the Perak project is secondary to us because it is for after 2030.

RY: **Who are you looking forward to working more closely with and how will it help water resources in Penang?**

PK: We are a government-linked company and the State Secretary of Penang is a major shareholder, so we work closely with them. Of course, we have to work closely with SPAN too, because the license is issued by them. The third is Pengurusan Aset Air Berhad (PAAB); some of our assets are leased to them. They are the only agency that can give us loans for our infrastructure projects. Most of our dams have been leased to them for the past 45 years; they usually offer a lower rate of interest.

We also work with a few small NGOs on water projects, but we do most of our projects with Water Watch Penang.

RY: **How can we adapt to climate change in terms of water demand?**

PK: We have adapted to climate change since 2009. When somebody talks about climate change, I think about what concerns the water operators. I have a small reservoir. How do I make it sustainable? When there is too much rain, do I have enough space to store the water? We have limited land area. To mitigate this, we can only expand the Mengkuang Dam—that is done. We can sustain three months without rain. During heat waves, people tend to bathe more, farmers also use more water, this is a concern for water operators.

We have domestic and non-domestic consumers—around 60% and 40% respectively. There is not much we can do with the non-domestic sector. This is the key rationale behind PBAPP's "Minus 10%" campaign, which we promoted during the May 2024 World Water Day commemoration in Penang. This can save approximately 50 to 60 MLD.

RY: **Many Penangites were disgruntled by recent water cuts. How can they be reassured of reliable water supply?**

PK: I would contend that Penang's water supply is reliable in 2024. Unless there is a water supply interruption, almost all Penang water consumers get water supply whenever they turn on a tap.

To make it clear, there are "scheduled water supply interruptions" (SWSIs) and "unscheduled water supply interruptions" (UWSIs). In 2023, there were four major UWSIs in Penang. Two of them were Sungai Muda mishaps that originated in Kedah. The other two were related to an underwater pipeline section that burst 3.5m below the surface of Sungai Perai.

From January to October 2024, there were two SWSIs and two UWSIs in Penang. As far as SWSIs are concerned, it is a PBAPP policy to always provide ample notice to all the affected water consumers ahead of time to minimise inconveniences. For UWSIs, we do implement preventive maintenance projects, but it is not possible to predict or prevent mishaps that are beyond our control. Both cause losses in income for PBAPP and incur significant expenditure for remedial works.

However, when a UWSI occurs, PBAPP personnel have always rushed to the scene to investigate and institute the most rational remedial works. What I can say is this: We have always tried to do our best to minimise the negative impact and normalise water supply services as quickly as possible.

RY: **Tell us more about WCP 2030.**

PK: WCP 2030 is the water contingency plan up to 2030. With this project, I can produce an additional 602 MLD. This is buying us time until the Perak-Penang

water project is ready. Our projection is to achieve 1,528 MLD by 2030, 1,440 MLD by 2040, and 2,178 MLD by 2050.

There are in total eight projects. First is the dissolved air flotation (DAF) water treatment plant in Bukit Panchor that started in December 2023. Then there is 12A Sungai Dua opened in September 2024 with an additional 114 MLD.

The third project is laying a dedicated 13km pipeline from Sungai Dua to Butterworth. Apart from the Sungai Dua-Butterworth stretch, there is another stretch of pipeline that is from Macallum to Bukit Dumbar. When you look at the overall planning, the third submarine is supposed to be connected to Sungai Dua, but it is now linked to the first and second submarine pipeline. That is what we are currently working on. We can't do all the projects in one go, hence, we have to separate them into phases.

As for the Mengkuang WTP, it was handed to PBAPP by the state government in 2020. We want to convert Mengkuang Dam into a daily dam. By doing this, I can produce around an additional 114 MLD. But the risk is how to refill the dam again? Because that dam depends on Sungai Kulim; it is not a natural catchment, we can only pump in water. We call it a strategic drought reserve dam. Whenever there is a surplus water in Sungai Kulim during the wet season, which is around two months, we pump it into this dam. We have requested from the federal government for available water in Sungai Muda to be pumped into the dam too. We want the pipeline to be reversible depending on water availability. We are also upgrading the canal.

In the initial SPRWTS, the water from Sungai Perak is to be released into Sungai Kerian. Because Sungai Perak is a cleaner water source, it does not make sense to mix it with Sungai Kerian water, which is deemed second grade. But since we are getting treated water from Sungai Perak, we thought we should just treat the water from Sungai Kerian too, separately.

The seventh project is the Sungai Perai water supply scheme, which can yield 136 MLD. Sungai Perai's natural yields are very low as it is brackish water. Although expensive, it is still cheaper than desalination.

Lastly, the barrage on our side on the Sungai Muda WTP is lower than the other side, and therefore, a lot of water is released to the sea. We are requesting an upgrade of the barrage, which can save us another 1,500 MLD. This barrage project is going on now and the contract has been awarded.

As of October 2024, we have completed the first and second WCP 2030 projects—the 10 MLD DAF Plant in Bukit Panchor and 114 MLD Package 12A in the Sungai Dua WTP. We are planning to complete the third and fourth projects by late 2025 or 2026. The remaining four projects will be implemented from 2025 to 2028, as scheduled. We are working with Pengurusan Aset Air Berhad (PAAB) to complete the Sungai Perai Water Supply Scheme and the Sungai Muda WTP in 2028.

RY: **We are ready for 2030, but are we ready for 2040? We have the numbers, but will our resources last until then?**

PK: No. The projects can only last to 2030. In comparison to other operators, we plan for the next 50 years, when others plan for 20 years. This is where desalination comes in. We are a water stressed state—it is laughable because our island is surrounded by water. And there is also talk about greywater. But what they overlook is that the moment they flush the water, it costs me three times to treat the water.

RY: **Wow, what a precious resource that we take for granted. Thank you for spending time with us, Dato'.**

PK: No problem at all.

RACHEL YEOH is a former journalist who traded her on-the-go job for a life behind the desk. For the sake of work-life balance, she participates in Penang's performing arts scene after hours.

WATER IN PENANG

BY HAJAR ARIFF

IN A RECENT workshop I attended, Abe Woo, a senior lecturer from Universiti Sains Malaysia's Centre for Marine and Coastal Studies (CEMACS), posed a question: If 71% of the Earth's surface is covered by water, why do we still call it planet Earth?

While water is essential for all life on Earth, most of the planet's water is salty ocean water. **Only a tiny fraction—2.5%—is freshwater,** towing the lifeline of all living things, from towering trees in rainforests to microscopic creatures and everything in between.

HAJAR ARIFF graduated from Universiti Tun Hussein Onn Malaysia (UTHM) with a Bachelor of Science (Hons) in Industrial Statistics. She is an introvert who lends her time to activism whenever the need calls.

PENANG'S WATER LANDSCAPE

Scaling down to Penang, where many industries are booming—from semiconductors to tourism—the state relies heavily on the **Sungai Muda River** for its raw water, which accounts for **92.1%** of the total supply (2015-2023).[1]

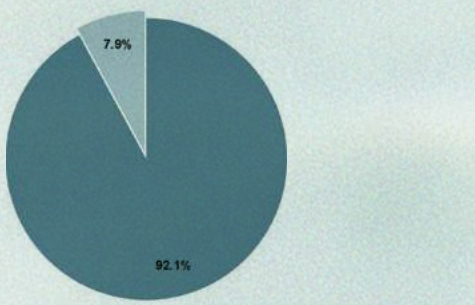
The remaining 7.9% is sourced from dams like Air Itam Dam and Teluk Bahang Dam, which are tapped daily to produce enough treated water for consumers.[2]

As a shared water resource, the Sungai Muda River's availability to Penang is intricately tied to Kedah's water demands. An increase in Kedah's water needs could strain the river's capacity, potentially jeopardising Penang's water supply, especially during dry seasons.

From 2014 to 2022, **domestic consumption** accounted for **60.2% of water usage.** This shows that household activities like cooking, cleaning and personal hygiene are the main drivers of water demand. Over a span of 25 years, water consumption in Penang has increased by about **63.6%,** from 536 MLD in 1999 to 877 MLD in 2023.

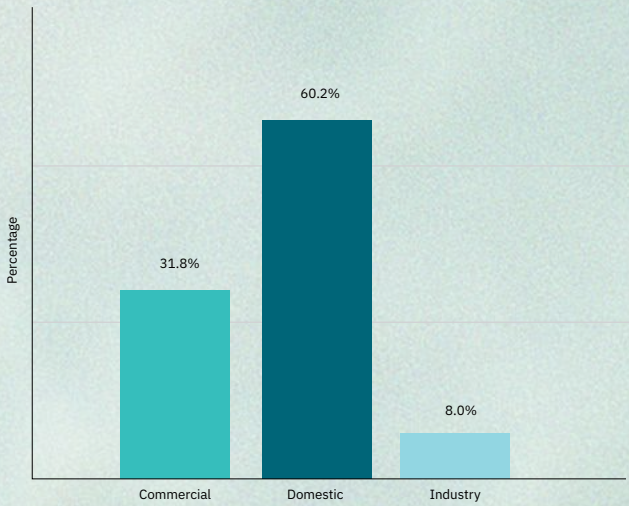
DISTRIBUTION OF WATER SOURCES IN PENANG, 2015-2023

Source: Water & Sewerage Fact Book, 2023, National Water Services Commission (SPAN)



DISTRIBUTION OF WATER USAGE BY SECTORS IN PENANG, 2014-2022

Source: Perbadanan Bekalan Air Pulau Pinang (PBAPP), 2014-2023



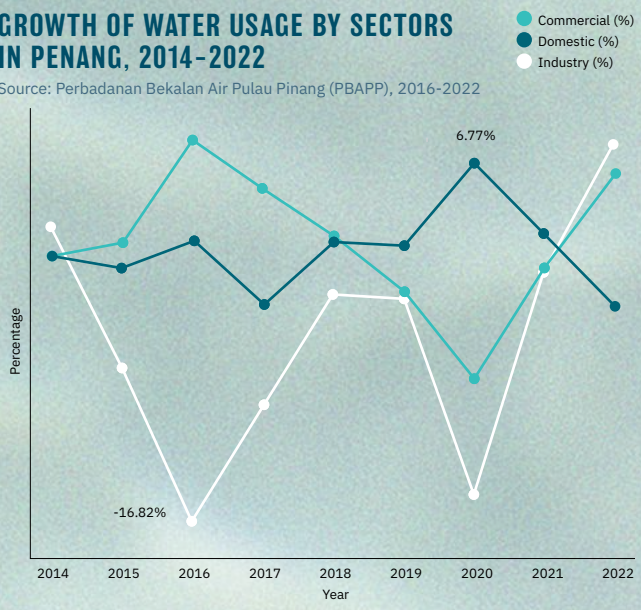
The year 2016 was marked by the severe El Niño event, also dubbed the Super El Niño phenomenon, which was a period of extreme heat and dryness, surpassing past years that significantly impacted northern Malaysia's water supply. To ensure sufficient water for domestic needs during this challenging time, Perbadanan Bekalan Air Pulau Pinang (PBAPP) sent out an alert to the public to conserve water, and also six official letters highlighting the threat to the federal government.[3] That year, the state's water consumption experienced a **decline of 16.82%.**[4]

There was a dip in the water consumption by industries in 2020 to 18,584 MLD (-15.14%) while domestic consumption saw a 6.77% increase to 194,632 MLD from the previous year. This was primarily due to the Covid-19 pandemic. Most people had to work from home and factories had to halt operations for extended periods.

Reduced domestic water consumption in 2022 coincided with a rise in water usage by commercial and industrial sectors, reflecting a return to more typical patterns of activity. These highlight the importance of considering both natural factors and human activities when managing water resources and planning for future water needs.

GROWTH OF WATER USAGE BY SECTORS IN PENANG, 2014-2022

Source: Perbadanan Bekalan Air Pulau Pinang (PBAPP), 2016-2022



***Note:** Author's own calculation from PBAPP's dataset.

PENANG'S WATER RATES

It was the federal government's decision to increase water rates in three federal territories and 11 Malaysian states, including Penang.

PBAPP was quick to note that it was not a PBAPP regulation or a Penang state government regulation, but a decision that fell under the 2024 "Water Services Industry (Rates for Water Supply Services) (State of Penang) (Amendment) Regulations".[5] This increase, effective 31 January 2024, aims to ensure the sustainability of water supply services and the ability of operators to continue providing 24-hour water supply to consumers.

WATER TARIFF RATES IN PENANG

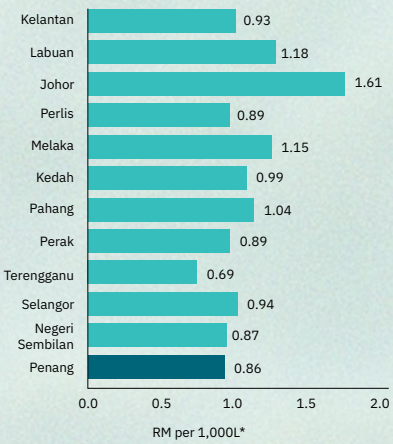
Source: Perbadanan Bekalan Air Pulau Pinang (PBAPP), 2024

Category	Consumption band	Rates (RM)	
		2023	2024
Domestic (Individual metre)	0-20m³	0.22	0.62
	>20-35m³	0.46	1.17
	>35m³	0.48	2.07
	Minimum charge	2.50	6.20
Domestic (Bulk metre)	Flat rate	1.66	1.73
	Minimum charge	16.60	17.30
Non-Domestic	0-35m³	1.50	1.57
	>35m³	2.10	2.17
	Minimum charge	15.00	15.70
Houses of Worship and Welfare Institutions	Flat rate	0.60	0.67
	Minimum charge	6.00	6.70
Shipping	Flat rate	7.00	7.07
	Minimum charge	70.00	70.70

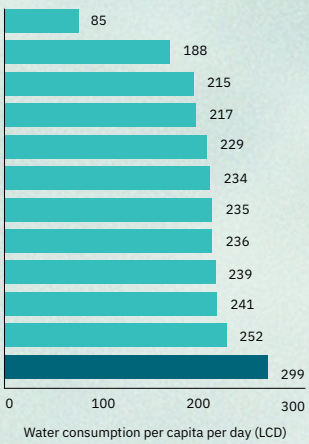
Despite the recent increase in water rates, the average domestic water rate for households using up to **35m³** per month in Penang remains among the lowest in Malaysia—in fact, ranking **second lowest.** Meanwhile, the **water consumption per capita is the highest in Penang** compared to other Malaysian states, showing how **low water tariffs drive high water consumption.** The revised water rates in 2024 aim to encourage all consumers, both residential and commercial, to use water more efficiently and help reduce future water demand.

AVERAGE DOMESTIC WATER TARIFF, RM PER 1,000L* (2024 REVISION)

Source: Federal Government Gazette, 2024



DOMESTIC WATER CONSUMPTION (LCD), 2023, BY STATE



***Note:** Average water tariff RM per 1,000L (applicable for the first 35,000L per month), 2024 revision.

WATER QUALITY CONCERNS

Sungai Satu and **Sungai Air Terjun maintained excellent water quality,** with a Water Quality Index (WQI) of more than **92.7** from 2019 to 2023, making it suitable for drinking, recreation and aquatic life. **Ammonia nitrogen (AN), mainly caused by agricultural and industrial runoff,** was the primary factor contributing to the decline of river water quality to Class V for most polluted rivers. However, Sungai Chempedak was an exception, with high Biochemical Oxygen Demand (BOD) being the main culprit.[6]

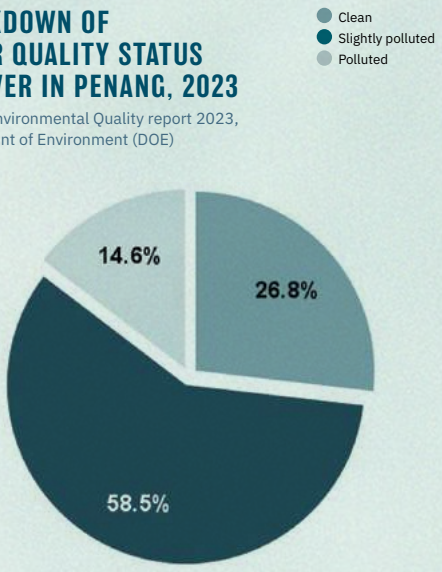
WATER QUALITY STATUS BY RIVER IN PENANG, 2023

Source: Environmental Quality report 2023, Department of Environment (DOE)

WQI Category	Basin	River
Clean	Sg. Kluang	Sg. Ara
	Sg. Pinang	Sg. Air Terjun
		Sg. Batu Feringghi
		Sg. Satu
Polluted	Sg. Jawi	Sg. Chempedak
		Sg. Jawi
	Sg. Juru	Sg. Rambai
	Sg. Kluang	Sg. Kluang
	Sg. Pinang	Sg. Pinang
		Sg. Titi Kerawang

BREAKDOWN OF WATER QUALITY STATUS BY RIVER IN PENANG, 2023

Source: Environmental Quality report 2023, Department of Environment (DOE)



***Note:**
WQI-Water Quality Index
AN-Ammonia nitrogen
BOD-Biochemical Oxygen Demand

Despite efforts to protect its waterways, a significant portion of **Penang's rivers exhibited poor water quality** in 2023, with over **70%** categorised as slightly polluted and polluted. This was particularly evident in the basins of Sungai Bayan Lepas, Sungai Jawi, Sungai Juru and Sungai Kluang.

ALTERNATIVE WATER SOLUTIONS

Source: Annual Report 2023, Perbadanan Bekalan Air Pulau Pinang (PBAPP)

Alternatives	Definition	Benefits	Drawbacks
Perak-Penang water project (P-PWP)	A plan for Perak to sell treated water to Penang.	Additional water resource beyond 2030. Lower cost compared to desalination, wastewater recycling or rainwater harvesting.	Dependency on Perak. Negotiation challenges. Federal government intervention.
Desalination	Process that removes salt and minerals from seawater or brackish water to produce fresh water.	Reliable and consistent source of water. Reduce reliance on external water sources.	High cost. High energy consumption.
Wastewater recycling	Process of treating wastewater to remove contaminants and reuse it for various purposes.	Reduce reliance on freshwater. Environmental benefits.	High cost. Technical challenges. Public perception.
Rainwater harvesting	Collection and storage of rainwater for later use.	Reduce reliance on freshwater. Encourage community engagement.	Limited water supply. Water quality concerns.

PENANG'S WATER PROJECTION

Penang's water demand is projected to increase significantly, from **840 MLD** in 2018 to as much as **1,884 MLD** by 2050.

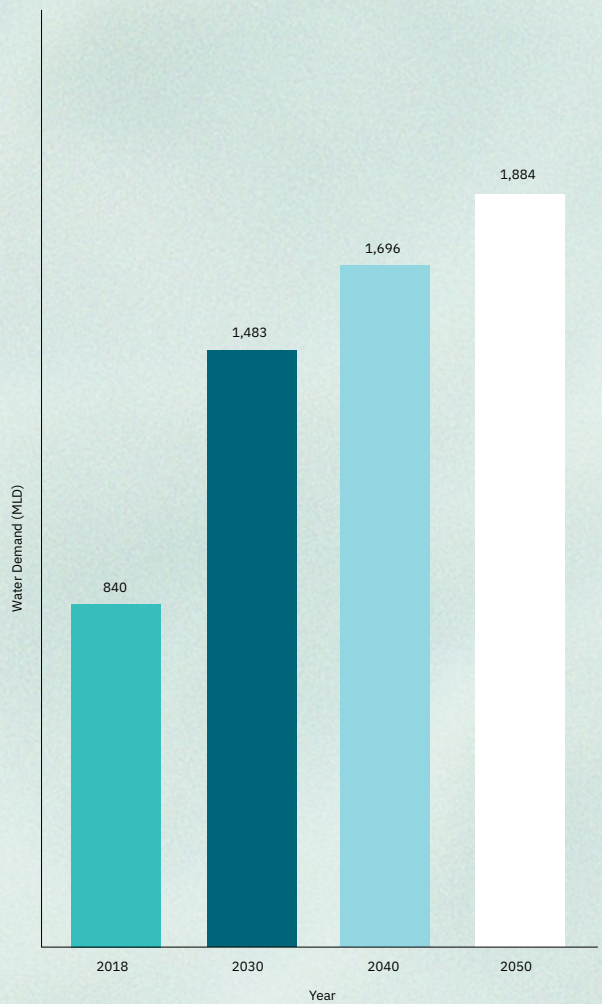
This represents a growth rate of approximately 2.4% per year. The projection suggests that Sungai Muda, Penang's primary raw water source, may not meet Penang's water needs after 2030.

On 8 May 2024, Prime Minister Anwar Ibrahim announced that Perak would supply treated water to the state, to which the PBAPP CEO Pathmanathan Krishnan remarked that it was the "best water news for Penang".[7] Indeed, this marked a significant milestone for Penang's water supply challenges in the past five decades. The agreement, reached between the Sultan of Perak and the Perak Menteri Besar, involves supplying water to Penang through the Kerian Integrated Green Industrial Park.

After the Perak-Penang Water Project is completed, PBAPP will no longer need to rely on the Sungai Dua water treatment plant to supply water to Seberang Perai Selatan. This will also help alleviate water security woes beyond the year 2030.

WATER DEMAND PROJECTION IN PENANG

Source: Perbadanan Bekalan Air Pulau Pinang's (PBAPP) website: https://sprwts.pba.com.my/index.php/water-demand/



FOOTNOTES

[1] Water & Sewerage Fact Book, 2023, National Water Services Commission (SPAN)Liew and Lim (2022). Cover Story: PENANG — Not short of investments, but of skilled workers. The Edge. https://theedgemalaysia.com/article/cover-story-penang-%25E2%2580%2594-not-short-investments-skilled-workers.

[2] Ibid.

[3] PBAPP press release 23rd April 2016 – Prevent a Water Crisis That Threatens More Than 4 Million People in 4 States

[4] Perbadanan Bekalan Air Pulau Pinang (PBAPP) Annual Report 2016

[5] PBAPP Press release, 26 April 2024, Penang Water Rates Are Regulated by the Federal Government

[6] Environmental Quality report 2023, Department of Environment (DOE)

[7] https://www.nst.com.my/news/nation/2024/05/1047760/pms-green-light-perak-water-supply-one-best-news-penang-51-years-says

TRANSLATOR OF STORIES

BY MEI JING

Reprinted from Pulau Pinang Magazine, *"Convent Light Street" issue.*

"As the government of the Straits colonies has officially announced Sundays as public holidays, all will have the chance to enjoy themselves on their day off. The rich will satisfy themselves with good food and the theatre and then fall into slumber. Youngsters will indulge in gambling and vice until they forfeit all their money and contract venereal diseases. But what about the old and the weak? They have nothing to do. If they had books to read, they would be quite happy to read translated Chinese novels and to acquaint themselves with new things which they have never heard before..."

SO WROTE Chan Kim Boon in a preface to the first volume of the Baba-Malay translation Song Kang from the Chinese classic *Water Margin*. Armed with the philosophy that his translations would entertain and educate the society in which he lived, Chan Kim Boon became renowned as an exponent of Baba-Malay literature. His audience was the Malay-speaking Baba society concentrated in the Straits Settlements of Malacca, Singapore and Penang at the turn of the century.

Malaya's Baba community consisted of descendants of early Chinese settlers, predominantly of the Hokkien dialect, who had acculturated themselves to the local customs and dress of their adopted country. For this community, the rich heritage of classical Chinese literature was made accessible to them by Chan Kim Boon's highly readable translations.

1

PORTRAIT OF THE TRANSLATOR AS A YOUNG MAN

Chan was born in Penang in 1851 to a Hokkien Baba household. His father, Chan Yeong Chien, was a businessman from Sumatra. While he received an English education at the Penang Free School, he also learnt Chinese from a home tutor.

At 15, Chan was sent to navy school in Foochow in the Hokkien province of China. When he was 19 years of age, Chan visited a fortune-teller who predicted that he would only live until 25 years of age. Deeply upset, Chan changed his mind about becoming a seaman and became a tutor at the navy school.

Dogged by the prediction of an early death, the young Chan experienced extreme depression and listlessness. First, he returned to Penang to be with his parents. After two months at home, Chan decided to find employment in Singapore. He worked as a clerk in a barrister's office, but whiled his evenings away at a gambling den, thus acquiring the nickname *lap sap sian*, roughly translated, "the saint of dissolution". It was only after being charged in court for gambling that Chan devoted more time to reading novels.

In May 1981, Chan was introduced to a translator named Tan Kheam Hock, a wealthy Singaporean Baba. It seemed that another translator by the name of Tan Beng Teik had begun the translation of *Hong Keow Sama Lee Tan*, but had gone away to Japan halfway through his undertaking. Tan Kheam Hock persuaded Chan to continue the translation of the five remaining episodes. When those were published, Chan was surprised to find his translations well-received. Chan was later requested to retranslate the first five episodes of the novel.

After this first effort, Chan started using his celebrated pen-name "Batu Gantong" (literally, hanging rock). This name incidentally referred to an old Hokkien cemetery in Penang (off Scotland Road) which was the site of such a landmark.

Encouraged by the favourable response, Chan decided to give up gambling and concentrate on making his contribution to Baba society. As he worked on his translations, Chan waited for his last days to arrive. However, contrary to the fortune-teller's prediction, Chan was to live until 70 years old. During his lifetime he translated more than 18 novels and stories, including *Hong Keow Sama Lee Tan* (凤娇与李丹), *Gnoh Bee Yean* (五美人), *Sam Kok* (三国), *Kim Ko Ki Kwan* (今古奇观), *Leow Chai* (聊斋), *Pow Kong Ann* (包公案), *Si Kong Ann* (施工案), *Na Kong Ann* (蓝工案), *Song Kang* (宋江), *Lim Ai Chu* (林爱珠), *Chey Tian Hoey Sioh* (齐天和尚), *Wong Ju Yak* (温如玉), *Keng Gno Cheng* (Mandarin name unclear), *Siau Chin Ek Su* (Mandarin name unclear), *Hoon Chong Lau* (分装楼), *Chit Hiap* (七侠), *Cheng Tong* (征东), *Cheng Sai* (征西), *Hoo Gnoh Tai* (后五代) and others.

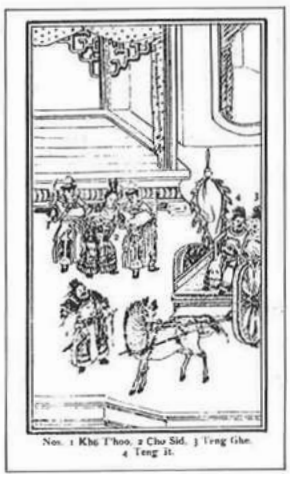
CAPTIONS

1. A photo of Chan Kim Boon.

2. From the Chinese classic *Sam Kok* (*Romance of the Three Kingdoms*).

3. Chan Kim Boon's books were available at "Mr. Donaldson's Warehouse"—Mr. Donaldson was a barrister and his legal firm still survives today as "Donaldson & Burkinshaw". Then also available in Beach Street, Penang.

4. The volumes of *Hwan Tong* were published alternately by Kim Sek Chye Press and Lau Pat Press. Chan Kim Boon's last major work was the Chinese classic *Kou Chey Thian* (*The Monkey*).



Nos. 1 Khe Thoo. 2 Cho Sid. 3 Teng Ghe. 4 Teng Ji.

SAM KOK. 2009

2

KA-NYATA-AN.

CHRITA DAHULU-KALA DARI BATU GANTONG.

CHRITA PASAL HONG KEOW SAMA LEE TAN.

'Kitab ka-satu (revised) dengan gambar gambar chantek, mula bulan October baru boleh sedia.
Kitab ka-dua (revised) dengan gambar gambar chantek, bulan Nov. 1892, boleh sedia.
Kitab ka-tiga (revised) dengan gambar gambar chantek, bulan Jan. 1893, boleh sedia.
Kitab IV, V, VI, VII, sama VIII, (panghabisan) sudah sedia.

CHRITA PASAL

ORANG LIMA BINI.

Kitab I sampay VI (panghabisan) sudah sedia.

CHRITA SAM KOK,

PASAL TIGA NEGRI DER-PRANG.

Kitab I, II, sama III, sudah sedia.
Kitab IV, bulan October, baru boleh sedia.

Manuscripts:—Kapada kitab V sampay XV. (CHRITA) sudah di tulis-kan. Kapada kitab XVI. sakarang ada manulis.

F. T. O.

KALU INI CHRITA SAM KOK,

sudah di tulis-kan habis, saya mau tulis ini chrita chrita ka-bawa, nama-nya:—

Chrita pasal Kim Kê Ki Kwan (sanua).
Do. Leow Chai (lebeh korang, yang sda ber-guna).
Do. Pow Kong Ann (pasal pakara bachara).
Do. Si Kong Ann. Do.
Do. Na Kong Ann. Do.
Do. Swi Hoo, atau Song Kang.
Do. Lim Ai Chu.
Do. Chey Tian Hooy Sieh.
Do. Wan Ju Yak.
Do. Kong Gnô Cheong.
Do. Sian Chia Ek So.
Do. Hoon Chong Lea (Lo Khoon sama Lo C'hân.)
Do. C'hit Biap.
Do. Cheng Tong.
Do. Cheng Sai.
Do. Hô Gnoh Tai.

Rumah No. 55, Upper Chin Chew Street, Gudang Twan Donaldson, No. 19, Collyer Quay. Kongsi-Mas'at No. 33, Telok Ayer Street. PENANG, Messrs. Theam Chee & Co. Chop "Loon Hong," Beach Street. BATU GANTONG, Proprietor.

SINGAPORE, 28th September, 1892.

3

CHRITA DULU-KALA

"HWAN TONG"

CHEW TEOW

CHRITA KA-LIMA

BATU GANTONG.

CHRITA DAHULU-KALA

GNOH BEE YEAN

"Beng Teow."

KITAB KA-LIMA

BATU GANTONG.

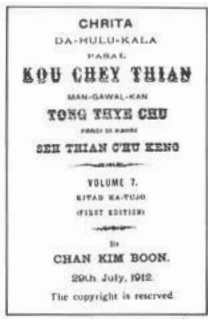
CHRITA DAHULU-KALA DI TRIAS

Song Kang,

"SONG TEOW."

VOLUME VI.

CHAN KIM BOON.



CHRITA DA-HULU-KALA

KOU CHEY THIAN

SEH THIAN C'HU KENG

VOLUME 7.

CHAN KIM BOON.

29th July, 1912.

The copyright is reserved.

4

THE SERIAL

While Baba-Malay was the patois spoken by Malaya's Baba community, their counterparts in the Dutch Indies, the Indonesian Chinese, employed a patois which was romanised in the form of Bahasa Melayu-Tionghua (Sino-Malay language). The written form of Baba-Malay was profoundly influenced by the standardisation processes which had already taken place in Bahasa Melayu-Tionghua in the second half of the 19th century. In fact, the precursor of Baba-Malay translation literature was found in the translation works of the Indonesian Chinese, for the first Baba-Malay translations of Chinese novels were actually retranslations from Bahasa Melayu-Tionghua.

Chan's translations were published by Kim Sek Chye press in Singapore. As a rule, longer novels would be published in serial, with page numbers continuing from one book to another, excluding pictures, prefaces and bibliographies. Each book was roughly 4 by 6.5 inches in size, and 100 to 170 pages thick.

Serialisation was a method commonly used in Chinese publishing and it was also adopted by the Indonesian Chinese for their publications. Besides lightening the translator's workload and the publisher's financial undertaking, the method also encouraged sales. A complete book costing $30 or so in those days would be beyond the reach of the man in the street, whereas a single volume, modestly priced, would be more affordable to the reading public.

In Indonesia, the translation of the famous novel *Three Kingdoms* or *Sam Kok* was carried in 62 volumes, sold at 50 cents each. In Malaya, the same novel was published in 30 volumes which appeared monthly or bi-monthly. Each volume consisted of 160 pages and was priced at one dollar. The first book appeared in June 1892 and the last in July 1896, so the reader would have had to follow the story over a period of four years.

5

INTERVIEW WITH MADAM CHAN GAIK SUNG, GRANDDAUGHTER OF CHAN KIM BOON

BY KHOO SU NIN

I was born in Singapore in my grandfather's house at Teluk Ayer Street, where he lived with his three wives and their numerous children. It was a rather long terrace house with main entrances onto the streets at both ends.

When Chan Kim Boon was still young, his father died, leaving his mother to take care of him and his brother. It was often told that my great-grandmother had very poor eyesight and could only tell her sons apart by reaching out to see which boy was the taller. Nevertheless, she provided for her sons by making Nonya cakes.

When he had become successful, my grandfather bought a house in Penang, at 75 Muntri Street, because he liked it so much. His third son Chan Yen Tam, who was my father, came to live here after he left his job in Singapore with the government opium dispensary. That is how I came to grow up in Muntri Street. At that time, it was a wealthy neighbourhood and all the major processions, such as the Chingay and lantern festivals would pass through our street.

A good friend of my grandfather's, Cheah Choo Yew, used to live across the street a few doors away. Another close friend of my grandfather's was Tan Kheam Hock, who lived in Singapore. The two families were brought together when Tan's son married the daughter of the eldest son of Chan Kim Boon.

There is still a signboard with our surname "Chan" above the entrance of the Muntri Street house. In addition, a pair of signboards used to hang on either side; on them were written, instead of the traditional Chinese couplet, the words "Chan Kim Boon" on one side and "'Batu Gantong" on the other, spelt out in old-fashioned ornamental Roman script.

I have often heard a story about my grandfather's unusual brand of humour. When my grandfather was in Penang, some friends from Singapore came out to visit him. They assumed that Chan Kim Boon's pen-name "Batu Gantong" indicated his place of residence. When they went to look for Chan Kim Boon at Batu Gantong, they were surprised to find in that place a large Hokkien cemetery.

After this frustrating attempt, the Singaporeans finally located my grandfather at his house at Muntri Street. When they told him of their wild goose chase, my grandfather only laughed and said that Batu Gantong would indeed be his permanent place of residence as his grave would be sited there.

Using "Batu Gantong" as his address was a joke my grandfather played on his friends. Nonetheless, the place was really special to him. When he passed away in 1920, my grandfather's corpse was shipped from Singapore to be buried in Batu Gantong, after a grand funeral through the streets of Penang.

Although my father did not follow in my grandfather's footsteps as a translator, I remember he loved books and used to have many friends from the Criterion Press. He kept my grandfather's books dearly and even sent them to England to be hand-bound. Unfortunately, most of the books were destroyed during the Japanese occupation.

6

7

5. Madam Chan Gaik Sung.

6. The house at Muntri Street. The signboard above bears two characters denoting the surname "Chan".

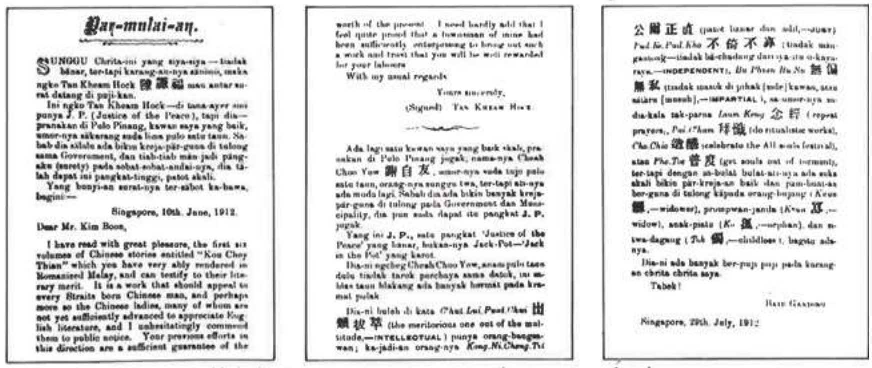
7. The funeral procession through Muntri Street. *(Courtesy of Madan Chan Gaik Sung)*

8. From right to left: Chan Kim Boon, his mother (with a grandchild), his daughter and his wife. Probably taken on the day of his daughter's wedding. *(Courtesy of Madan Chan Gaik Sung)*

8

9. The illustrator's self-portrait.

10. Letters to the Editor were published in his personable prefaces. Here Chan Kim Boon takes the opportunity to extol the virtues of his fellow "Penang borns", Tan Kheam Hock and Cheah Choo Yew.



Par-mulai-an.

SUNGGU Chrita-ini yang siya-siya — tiadak binar, ter-tapi karang-an-nya sahaja, maka ngko Tan Kheam Hock 陳謙福 mau antar surat datang di puji-kan.

Ini ngko Tan Kheam Hock—di tana-ayer sini punya J. P. (Justice of the Peace), tapi dia—pranakan di Palo Pinang, kawan saya yang baik, umor-nya sakarang suda lima pulo satu taun. Sabab dia silalu ada bikin kreja-pår-guna di tolong sama Government, dan tiab-tiab mău jadi pång-aku (surety) pada sobat-sobat-andai-nya, dia tå-lah dapat ini pangkat-tinggi, patot skali.

Yang bunyi-an surat-nya ter-såbot ka-bawa, bagini:—

Singapore, 10th. June, 1912.

Dear Mr. Kim Boon,

I have read with great pleasure, the first six volumes of Chinese stories entitled "Kou Chey Thian" which you have very ably rendered in Romanized Malay, and can testify to their literary merit. It is a work that should appeal to every Straits born Chinese man, and perhaps more so the Chinese ladies, many of whom are not yet sufficiently advanced to appreciate English literature, and I unhesitatingly commend them to public notice. Your previous efforts in this direction are a sufficient guarantee of the worth of the present. I need hardly add that I feel quite proud that a townsman of mine had been sufficiently enterprising to bring out such a work and trust that you will be well rewarded for your labours.

With my usual regards

Yours sincerely,

(Signed) TAN KHEAM HOCK.

Ada lagi satu kawan saya yang baik skali, pranakan di Palo Pinang jugak, nama-nya Cheah Choo Yew 謝自友, umor-nya suda tujo pulo satu taun, orang-nya sungguh twa, ter-tapi ati-nya ada muda lagi. Sabab dia ada bikin banyak kreja-pår-guna di tulong pada Government dan Muncipality, dia pun suda dapat itu pangkat J. P. jugak.

Yang ini J. P., satu pangkat 'Justice of the Peace' yang banar, bukan-nya Jack-Pot—'Jack in the Pot' yang karot.

Dia-ni ngcheg Cheah Choo Yew, anam pulo taun dulu tiadak tarok perchaya sama datok, ini sa-blas taun blakang ada banyak hormat pada kramat pulak.

Dia-ni buleh di kata Chut Lui Puat Chui 出類拔萃 (the meritorious one out of the multitude,—INTELLECTUAL) punya orang-bangsawan; ka-jadi-an orang-nya Kong.Ni.Cheng.Tit 公爾正直 (patut banar dan adil,—JUST) Put.Ki.Put.Kho 不倚不靠 (tiadak mangantong—tiadak bå-chadang dari ya-itu o-kaya-raya.—INDEPENDENT), Bu Phian Bu Su 無偏無私 (tiadak masok di pihak [side] kawan, atau sitara [musuh],—IMPARTIAL), sa-umor-nya sadia-kala tak-parna Liam Keng 念經 (repeat prayers), Pai Cham 拜懺 (do ritualistic works), Cho Chio 做醮 (celebrate the All souls festival), atau Pho.Tue 普度 (get souls out of torments), ter-tapi dengan sa-bulat bulat-ati-nya ada suka skali bikin pår-kreja-an baik dan pam-bunt-an ber-guna di tulong kåpada orang-bujang (Kuan 鰥,—widower), prumpwan-janda (Kuan 寡,—widow), anak-piatu (Ko 孤,—orphan), dan sa-twa-dagang (Tok 獨,—childless), bagitu ada-nya.

Dia-ni ada banyak ber-puji puji pada karang-an chrita chrita saya.

Tabek!

BABA GANTONG

Singapore, 29th. July, 1912.

10

9

THE LANGUAGE

Although Baba-Malay speech was considered by some to be a corrupted form of Malay speech, Chan's translations demonstrated that Baba-Malay had its own consistency and structure. The language was written as it would have been spoken, dotted with Hokkien words. Some were common words such as "Goa" (I) and "Lu" (you), while others were words for which there were no Malay equivalents in nuance, such as "Liang Sim" (generosity) or "Um Kam Gwan" (resentment, dissatisfaction) or nicknames and titles like "Oh Kwi" or "Tye Ong".

The grammar of Baba-Malay also bore certain similarities to Bahasa Pasar (literally, "market language" i.e. colloquial Malay) with the prevalent use of the words "ada", "mau", "punya" and "sama". The spelling of romanised Malay words were not standardised then as they are now (from *Sam Kok.* Vol.23, pg.3337):

> *Khong Beng kata, "goa suda dapat tangkap-kun lu anam kali, lu bagitu lagi tiadak mau tundok ya, mau nanti sampey bila?"*
>
> *Beng Hek bilang, "kalu sampey ka-tujo kali mika buleh dapat tangkap-kan haku, haku baru ada trus ati mau tundok, dengan manarok sumpa, tiada mau buat ara-ura lagi."*
>
> *Khong Beng bilang, "lu punya sangkar suda pacha, goa ada apa susa," dan suro hulubalang-nya buka-kan dia orang punya tali-ikat-an smua...*

Besides jokes, humorous stories or fables, Chan often inserted commentaries, anecdotes and articles about Chinese customs in order to revive interest in traditional Chinese culture and moral thinking. For example, he discussed the "four prohibitions" of contemporary Chinese society —womanising, gambling, drinking and smoking—using Chinese maxims to strengthen his advice.

Illustrations were specially commissioned for Chan's publications and the most famous of his illustrators was known as Tan Phaik Kong. As his novels accumulated a faithful following, Chan published his own photograph and Tan Phaik Kong's humorous self-portrait. Chan mentioned in a preface that Tan Kheam Hock checked his translations, and Tan's portrait appears in another book as "Assistant Batu Gantong". Readers wrote to Chan in English, Baba-Malay and Chinese, and both favourable and critical letters were published in his books.

THE DECLINE

Translation works in Baba-Malay were the foundation of a new literature, but the fate of this literature was to be decided not on its own merits, but by the transformation of Baba society. In the early 20th century, the British Government began encouraging the use of English among the non-Europeans. As a result, Baba families preferred to have their children educated in English. As Baba-Malay gradually declined in importance, translation literature lost its following in Malaya, as did Bahasa Melayu-Tionghua translations in Indonesia.

Chan explained his motive for undertaking translation works in the first book of *Hong Keow Sama Lee Tan* "... in order to let all my friends have the chance to read my books, I do not mind spending my money or wasting my energy, so long as I will become famous as a result." He could not foresee that the language he had tried so hard to promote would gradually wither away only several decades after his death.

On Chan Kim Boon's gravestone in Batu Gantong is written:

In Memorium
Mr. Chan Kim Boon
Translator of Stories:
Hwan Tong
Ngoh Bee Yean
Sam Kok
Song Kang
Kou Chey Thian
Died in Singapore at age
70 on 7th April 1920.

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THE FORGOTTEN BRITISH OUTPOST

BY EUGENE QUAH TER-NENG

IN THE HEART of Singapore's bustling Central Business District, Bencoolen Street hums with activity. Locals and tourists alike traverse this busy thoroughfare, many descending 43m below to board trains at Bencoolen MRT station. Yet, for all its familiarity, the street's namesake remains a mystery to most. Few Singaporeans or Malaysians can pinpoint the location of the original Bencoolen.

Its Hokkien name, *Mang-ku-lu toa lo* (Mangkulu main street), is much closer to the actual pronunciation of its namesake, Bengkulu—a contraction of Bang-kahulu[1] in Minangkabau. Unsurprisingly, it was mangled into Bencoolen after passing through the English tongue; much like how Pinang became Penang. Singapore in its early days was under the jurisdiction of Fort Marlborough at Bencoolen, whose Lieutenant-Governor was none other than Sir Thomas Stamford Raffles, the founder of British Singapore. The street was named after the Malays from Bengkulu who settled nearby after following Raffles to the new settlement.[2]

WILD WEST

Kota Bengkulu, formerly Bencoolen, remains off the beaten path. Nestled in southwestern Sumatra, it is a challenging 16- to 24-hour overland journey from major cities. The most practical route is flying to Soekarno-Hatta Airport in Jakarta, then catching a one-hour domestic flight to Bengkulu, though cancellations and delays are common due to low demand.

Bengkulu's Fatmawati Soekarno Airport, named after Indonesia's First Lady, is small but modern. Most of the passengers—as I found out from talking to some during the flight—are returning locals. I am the only tourist. Curiously, the arrival area features a lounge named after Raffles—an unusual nod to a European figure in post-colonial Indonesia. I found out during my weeklong stay that Raffles is a rare exception; here, his reputation remains intact. During the last days of the British at Bengkulu, Raffles, at great personal cost, tried to improve the living conditions in the place he described as the "the most wretched place I ever beheld". Four of his own young children would perish here.

Bengkulu province is the natural habitat of the world's largest flower, the *Rafflesia arnoldi,* named after Raffles by the naturalist Joseph Arnold. The city is quite Rafflesia-mad. It is the official flower and there is a major road named after it. The largest attraction in Kota Bengkulu is the 313-year-old Fort Marlborough. Far from the usual tourist haunts of Jakarta and Bali, this British fortification—both the largest and best preserved in Southeast Asia—is hardly known outside Sumatra. Perhaps it might come as a surprise to most Malaysians that Fort Cornwallis in Penang is neither the largest nor the earliest British garrison in Southeast Asia. Built seven decades later than Fort Marlborough, Fort Cornwallis covers an area of 30,923.6m^2, while the older Sumatran stronghold is 40,000m^2.

2

PRELUDE TO PENANG

The British East India Company (EIC) had trading posts in the Malay Archipelago—which the Europeans considered part of the East Indies—184 years before the settlement of Penang. The first EIC fleet, led by its founding director, Sir James Lancaster, who commanded the *Red Dragon,* arrived in early 1602 at what is now Banten, West Java. 10 years earlier, in June 1592, Lancaster and his crew, during their first disastrous voyage to the East Indies, was stricken with scurvy. He headed for Penang to recuperate—a three-month sojourn which healed him and the crew of *Edward Bonaventure* enough for them to sail on. Lancaster would go on to establish the East India Company with other London merchants. [See *Penang Monthly* March 2024 and June 2024 issues on Pulau Rimau and Juru.] The EIC held on to their loss-making Bantam outpost—which they foolishly elevated to an expensive Presidency—until they were ousted by the Dutch on 1 April 1682.

3

The EIC, anxious to not be left out of the lucrative pepper trade, decided to set up a trading post on the rugged and out-of-the-way western coast of Sumatra. Unfortunately for the shareholders, this new venture turned out to be another costly debacle. In 1685, the fleet from Madras, under the command of Ralph Ord and Benjamin Bloome, was sent to establish the Sumatra trading post at Priaman. However, "upon a caprice of their owne", they sailed past their intended destination and landed further south at Bengkulu because "they hear[d] there was more pepper there".

A small fort, called Fort York, was built at an unhealthy swampy location. It turned into an absolute farce when it was discovered that the place could not produce the required amount of pepper to be profitable. Fort York was later abandoned when the bigger Fort Marlborough[3] was built nearby on higher ground in 1711. When completed eight years later, it would be—on paper—the strongest British fort in the East Indies, second only to Fort St. George in Madras. The establishment of the settlement of Bencoolen, the Directors later lamented, "was a fatall and never enough to be repented errour" that "spend our strength, our money and soe many men's lives".

The fortunes of the East India Company in the Malay Archipelago finally changed with the establishment of the ports of Penang in 1786 and Singapore in 1819, thus securing them control of the entire Strait of Malacca, a vital waterway for global trade.

KOTA BENGKULU

The Bengkulu of today is far different from the one Raffles found when he first arrived. He was told by the locals it was a *"tana mati"* (dead land). These days, it is a rather pleasant seaside town with endless beaches on one side and lush green mountains on the other.

4

CAPTIONS

1. (Cover spread) View of part of the south bastion and the ravelin on the right, separated by a dry moat (ditch).

2. View of the ravelin and Kampung Cina in the distance from the western rampart.

3. Soekarno's house in exile in Kota Bengkulu where he lived from 1938 to 1942. He was banished to the isolated town by the Dutch as a political prisoner. The house once belonged to a Chinese merchant named Lion Bwe Seng. It is now gazetted as a National Cultural Heritage building.

4. Air Terjun Sengkuang (Sengkuang Falls) in highlands where coffee and tea are cultivated.

5. Gunung Bungkuk (1,235m) as seen from Bukit Kandis (115m). The British called Gunung Bungkuk the Sugar Loaf Mountain, probably due to its resemblance to the more famous one in Rio de Janeiro, Brazil. In 1711, Joseph Collet's ship was captured by the French when he was in Rio. He was released after paying a ransom and then made his way to Bencoolen the following year to become its Deputy-Governor. He was responsible for building Fort Marlborough. The mountain can be seen from the fort as featured in many paintings.

6. Kampung Cina is just beside Fort Marlborough, between the fort and the beach to the west, which the locals call Pantai Malabero (Marlborough Beach). The descendants of the Chinese who were encouraged to settle here by the British still live in this rustic looking part of Kota Bengkulu, among temples and shops selling joss sticks.

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Bengkulu's change of fortune in the 20th century can be traced back to the time when Soekarno was banished there by the Dutch in 1938. Here, at this backwater, he found love with Fatmawati, a local girl who would later sew the nation's first flag and become mother to its first female president, Megawati. When Soekarno became founding president of the Indonesian Republic, this connection to the nation's first family transformed Bengkulu from a neglected outpost to a place with national significance and into the recipient of sorely needed infrastructure investments. Fatmawati's and Soekarno's homes were a stone's throw away from each other. Both are now museums and national pilgrimage sites of sorts for patriotic Indonesians. Soekarno's house, set amidst a well-kept garden, is both modest and charming, and is worth a visit.

Bengkulu province, larger than Johor and Melaka combined, is home to Kota Bengkulu, a wind-swept coastal city of 370,000. Half the size of Penang Island, the city is spread out with hardly any tall buildings and traffic. The houses here are spacious and the roads clean. There are no slums in sight. Kota Bengkulu has modern amenities—well-stocked malls, convenience stalls and good Internet access. Most people here only speak Bahasa Indonesia or the local Rejang language. Transportation is both convenient and affordable using either Grab or Gojek, the two main e-hailing services here. The Bengkulu residents I met, invariably friendly and helpful, were bemused but delighted that I was exploring their hometown—the only foreigners in town were some Koreans and Indians working at the power plant, and the odd Westerner passing through to the nascent surfing community south of the province. I was told that part of the coast boasts dramatic seascapes and surf rivalling Bali.

5

FORT MARLBOROUGH

It has been said that one has not visited Kota Bengkulu unless one has seen Fort Marlborough. Built on a mound, it is an imposing structure that is preserved in excellent condition. Solidly built, with stones imported from Madras, the fort was left unscathed after the massive 7.9 magnitude earthquake struck the region in 2000. Unlike Fort Cornwallis in Penang, this fort was the scene of numerous battles; it was sacked by the Malays twice and once captured by the French. Bencoolen and the fort were yielded to the Dutch in exchange for Melaka through the Anglo-Dutch Treaty of 1824.

Beside Fort Marlborough are Kampung Cina and Kebun Keling.[4] The entire complex is surrounded by a deep dry ditch (it never had a moat). It was near closing time when I visited the fort on a hot and windy June afternoon. After crossing and entering a ravelin,[5] I was greeted by the sight of three large memorial stones and the ticketing counter. The whole fort is a museum, its various rooms host exhibits related to the architectural, military and commercial history of the establishment. The curated information—mostly based on the meticulous work of Major Alan G. Harfield—is commendable, relying mostly on primary sources from British and Dutch archives.

6

One of the exhibits mentioned that Elisha Trapaud was once the engineer of the settlement. Incidentally, Trapaud was one of those present at the flag-raising ceremony with Captain Francis Light when the EIC established a new settlement in Penang in 1786. There is also another link to Penang; according to Light, on 5 June 1787, 126 slaves from Bencoolen arrived in Penang, "on the direction of the governor general to assist with the clearing [of] the land etc.", showing the cooperation between the two settlements.

From the ramparts, one can see the sea, the town and the surrounding hills. Bengkulu had never been blessed with a good harbour and calm waters. During British times, ships would anchor off Pulau Tikus[6]—a small island always within view from the long beach that hugs the town. Goods and passengers would then make it to shore on smaller vessels, at the mercy of the strong surf and wind. As it is near sundown, I join the throng of locals sitting at the top of the west-facing ditch. It is a Thursday. I am told watching the sunset by the fort is a popular daily activity. From this vantage point which faces the Bay of Bengal unobstructed, the sun floats rapidly in front of me, like an awe-inspiring red fireball, before sinking below the horizon.

As darkness falls and the first stars appear over the Indian Ocean, I am struck by a sense of connection I feel to those who once found themselves on these shores: explorers, colonisers, revolutionaries and countless ordinary people—local and foreign—whose lives intersected with this once God-forsaken place. The echoes of history are never far away here, inviting us to listen and learn. For the curious traveller willing to venture off the beaten path, Bengkulu offers a unique window into this chapter of history.

FOOTNOTES

[1] Bangkahulu itself is said be a contraction of the phrase: "*empang ka hulu*", a strategy purportedly employed by the local defenders to prevent an invading Achenese force from going upstream by damming up (*empang*) the river mouth (*hulu*) by drifting as much debris such "*rebo*" and logs as possible downstream.

[2] The Minangkabau people from Bengkulu also founded settlements at Hulu Selangor and Negeri Sembilan on the Malay Peninsula. There is still a Kampung Bangka Hulu at Gemas, Negeri Sembilan.

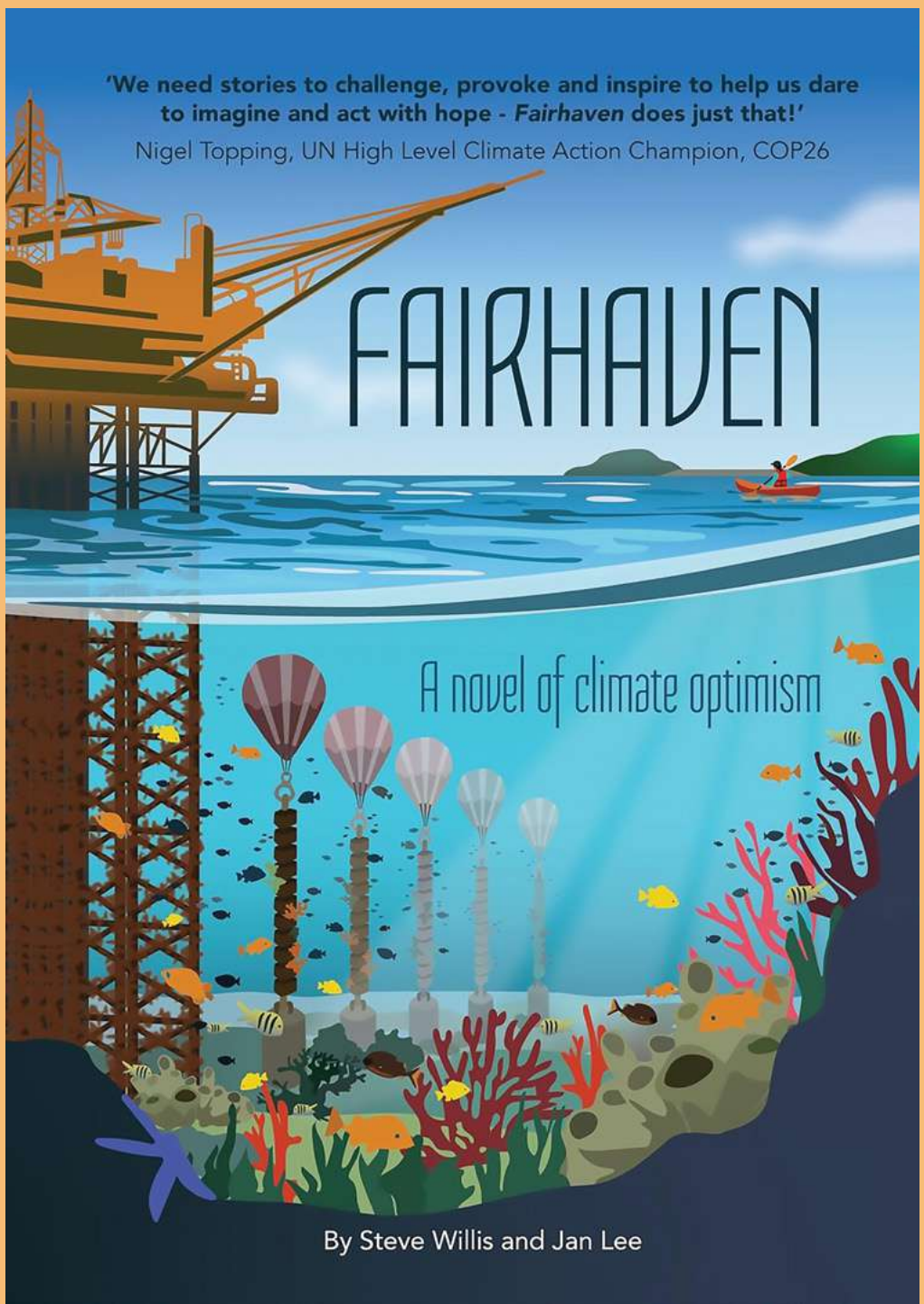
[3] Named after John Churchill, the first Duke of Marlborough (1650-1722), by Joseph Collet.

[4] Keling, a term once used to describe people of Tamil descent (in reference to the ancient Kalinga Kingdom), is now considered derogatory in modern Malay. There is a famous mosque in Penang called Kapitan Keling.

[5] An arrow-shaped defensive structure built to protect the entrance of a fort.

[6] Coincidentally, Penang also has an islet called Pulau Tikus, which marks the entrance to the harbour.

FAIRHAVEN: AN UNREALISTIC OPTIMISTIC RENDITION OF THE FUTURE



BY ANNA TAN

CLIMATE FICTION IS, in general, any kind of literature that deals with the effects of climate change. It is often considered a subgenre of science fiction because of its speculative nature—writers tend to either present a dystopic future projected on our current trajectory or start in the near future with proposed solutions that don't exist yet or are still in development.

While I haven't explored climate fiction extensively, the *Nothing is Promised* series, the work of one of my favourite authors, Susan Kaye Quinn, is classified "hopeful climate fiction" or hopepunk—*Fairhaven* by Steve Willis and Jan Lee presents itself in a similar vein.

A NOVEL OF CLIMATE OPTIMISM

Fairhaven revolves around the life of Grace Chan, a Chinese-Indian from Malaysia, as she and the Fairhaven team work to "bring climate solutions to Southeast Asia and the world". They're racing against time and nature as natural disasters devastate cities worldwide; the biggest catalyst for global climate action in the novel is the destruction of the island nation of Kiribati by rising sea levels.

I'm no scientist, so I'm not going to comment on the actual science being put forth. However, the solutions presented on a global scale in the novel—including re-icing the Arctic, cultivating new reefs and other controlled fishing grounds on subsea structures, and land reclamation—are all extrapolations of local initiatives currently being carried out on a relatively small scale.

There's an air of cheerful optimism, with the premise that all the little things we're doing now can be scaled up to make a huge impact on climate change. Using Grace as the protagonist, someone from a developing country, it carries the message that any one of us can be a catalyst for change, no matter where we come from. There is also Muhammad, an almost-pirate who manages to turn his life around and help with the founding of the Ocean Restoration Project.

AN UNBELIEVABLE MALAYSIA

The term "worldbuilding" has recently been getting flak in writing circles because of its overuse. Some writers claim you only need worldbuilding in fantasy, while others insist that every single story, even realistic novels set in current times, needs some form of worldbuilding.

I'd tie this to the biggest criterion of writing fiction: it needs to be believable. Ever heard the phrase "Truth is stranger than fiction?" The strangest, most unbelievable things can happen in real life and people have to accept it as fact because it *happened*. Unfortunately for a writer, events in fiction have to unfold in a way that seems plausible to its readers. Even if it is set on a made-up planet with magic.

As a Malaysian reader—and even more specifically, a Penangite, where the major part of this novel is set—*Fairhaven* skews towards unbelievable. The bulk of the story takes place between the years 2026 to 2036 on a piece of reclaimed land called Fairhaven. It connects Penang Island to the mainland. This makes it *very* near future, and as such, the events that happen have to be able to emerge from the current status quo and society.

You see, Penang has been talking about building an LRT since the late 2000s, and as far as I know, construction starts this December, and is estimated to be completed in 2030. Hence, it is rather ambitious for Willis and Lee to want me to imagine that, in just a little over one year, the country could begin "the biggest climate adaptation project in the world" because Fairhaven Development Corporation (FDC) is a quasi-autonomous NGO—and this project, approved in 2026, will somehow be finished in 2029? Very ambitious.

While the optimism is encouraging, some of the scenarios presented in the book might require further consideration. The idea that Malaysia will allow dual citizenship by 2036 so droves of Malaysians can register for dual citizenship in the newly-formed Ocean Independent State (OIS) and vote for Grace to become president, I believe, is a far-fetched exploration of future possibilities.

IS THE THEORY POSSIBLE TO EXECUTE?

Fairhaven seems to have found supporters among climate activists and European readers. It does, after all, have a worldview that panders to the Global North; despite the diversity of its international cast and its setting in Penang, it still manages to feel very West-centric with a dash of white-saviourism. Zygmunt, the head of FDC and Grace's mentor figure, is Polish. Hans de Jong, one of the original FDC team who later takes over the ice project from the Japanese, is from the Netherlands. The US is the great international power that negotiates special rates for CO^2 absorption and shipping transit fees in OIS waters in return for providing legitimacy to the newly-founded nation.

Grace Chan, despite her rise to power, comes across in her role as mostly that of a social media celebrity figurehead or victim, her value being in writing short fiction to "change the world".

The climate solutions put forward in *Fairhaven* may theoretically work, but the outworking of it as presented is only possible if everything is attributed to nepotism. Adding several decades of distance may also make a difference. I'm additionally sceptical at the ending, which has strange Terminator vibes with a mention of Skynet (and no, not the Malaysian Skynet).

Perhaps my perspective is limited, and I'm unable to fully appreciate the optimistic vision presented in the novel. Maybe by the next General Election we'll elect a government that will be able to make and implement such drastic decisions.

Until then, I'll peg this as an alternate history novel or sheer fantasy.

In 2018-2019, **ANNA TAN** lived in Uxbridge, West London while pursuing an MA in Creative Writing: The Novel from Brunel University, London under a Chevening scholarship. She is the author of the *Absolution* series. Anna's books are available in print from shopee.com.my/tea- spoonpublishing or in print and ebook at teaspoon- publishing.com.my/shop.

SPEARHEADING SUSTAINABLE GROWTH

PDC IS THE first state agency in Penang to adopt the Environmental, Social and Governance (ESG) and Sustainable Development Goal (SDG) frameworks in its undertakings. This means that PDC's development for the next five years will be guided by its Strategic Plan 2024-2028 and Strategic Sustainability Framework along four main thrusts: Straightening the Basis of Our Governance, Enhancing Our Economic Sustainability, Protecting Our Natural Ecosystems, and Promoting Social Equity and Quality of Life.

This reflects its pledge to help shape a better future for the people of Penang.

CAPTIONS

1,2. Solar panels are installed on the rooftops of PDC's head office.

3. The mangrove area at Bandar Cassia is preserved despite large-scale development.

4. PDC's diversity-driven workforce.

5. PDC's CEO Aziz Bakar (5th from the left) with school representatives participating in the Back to School programme.

EMPOWERING TRANSPARENT GOVERNANCE

Trustworthiness, integrity and accountability form the bedrock of PDC's operations. This is reflected in its rigorous adherence to legal and regulatory frameworks as well as internal policies in alignment with the UN SDG16 of Peace, Justice and Strong Institutions.

PDC advances these ethical guidelines through three policies mandatory for all employees—Anti-Bribery & Corruption Policy, Gift Acceptance Policy and Whistleblowing Policy. This is to ensure that public resources are used responsibly to advance the interests of the community.

PDC has also established an Integrity Unit with five key functions: implementing good governance; strengthening integrity; detecting and verifying complaints of misconduct; complaint management; and ensuring legal compliance.

In line with new threats resulting from technological and digital advancement, PDC has also conducted numerous cybersecurity awareness programmes to safeguard against data breaches and cyberattacks. By educating employees and stakeholders on potential cybersecurity risks and the importance of data protection, PDC effectively equips the state's business landscape for digital- and future-readiness.

ELEVATING ECONOMIC SUSTAINABILITY

PDC is focused on converting financial input into product and service excellence, as well as supporting local businesses. Whenever possible, it prioritises the selection of local suppliers, and that way, also seeks to reduce transportation-related emissions.

1

2

3

This happens in tandem with larger economic projects such as the development of four world-class Global Business Services (GBS) facilities as well as state-of-the-art industrial parks. To date, 11 industrial parks spanning 7,471 acres have been completed, housing over 350 MNCs and 4,000 manufacturing-related SMIs/SMEs on top of creating over 250,000 job opportunities.

At the grassroots level, PDC continues to empower entrepreneurs through supplementary microcredit loans such as SPH (Skim Pinjaman Harapan) and TUT (Tabung Usahawan Tani).

UPHOLDING ENVIRONMENTAL STEWARDSHIP

Recognising the importance of maintaining Penang's natural ecosystems and biodiversity, PDC prioritises green initiatives and conservation measures in all its development plans, including promoting energy efficiency and sustainability in building projects and transportation infrastructure.

This is clearly seen within PDC-owned premises, where renewable energy and energy efficiency initiatives have been introduced. Solar panels have been installed on the rooftops of PDC's main office building and PDC-owned buildings. This year, PDC aims to install a total solar power capacity of 7,535kWp at their facilities, offsetting approximately 5,200 tonnes of CO^2 emissions—equivalent to the CO^2 absorption of 239,200 trees.

To encourage the use of electric vehicles in Penang, PDC will be installing EV charging stations at strategic facilities throughout the year.

Meanwhile, its "E-Refurbishing to E-Learning" programme, where refurbished desktop computers are donated to schools, simultaneously reduces electronic waste while supporting the education of underprivileged children.

By embracing green benchmarks and renewable energy adoption, PDC also reduces its carbon footprint and mitigates its environmental impact.

CHAMPIONING SOCIAL INCLUSIVITY

PDC places a strong emphasis on social inclusivity, ensuring that economic growth benefits all segments of Penang's diverse population. Through community-centric development projects, PDC seeks to enhance quality of life by improving infrastructure, providing affordable housing solutions and fostering inclusive spaces.

This culture of putting people first begins within PDC's own work environment, where an Occupational Health and Safety Policy helps employees and stakeholders feel safe, healthy and valued at all times. The corporation actively seeks to nurture the skills, knowledge and expertise of its people, creating space for continuous growth and improvement. As of September 2023, PDC has conducted 114 training sessions, including courses, seminars and workshops.

Another key focus is on community engagement; on connecting with residents of all walks of life. Significant efforts have been made in upgrading residences such as structural repairs and repainting of apartment blocks. PDC also organised Mutiara Food Bank, a food aid programme for the community, as well as the Back to School Programme 2023 to contribute school bags, stationery and vouchers to students from four schools.

SUSTAINABILITY TODAY, OPPORTUNITY TOMORROW

As Penang continues to evolve as a global city, PDC remains committed to leading the charge in sustainable development. Indeed, PDC firmly believes that this will not only raise the quality of life in Penang, but translate into greater economic possibilities.

Penang stands proud as an exemplary state where sustainable growth enriches citizens' lives, nurtures the environment and elevates society as a whole.

4

5

"As Penang continues to evolve as a global city, PDC remains committed to leading the charge in sustainable development."

RECOGNISING THE DEEP PLIGHT OF OUR FARMERS AND THE KEY ROLE THEY PLAY

BY NISHA KUMARAVEL

FARMERS, PARTICULARLY SMALLHOLDERS, are integral to Malaysia's agricultural sector as they account for approximately 76% of Malaysia's food and agricultural production.[1] Despite their substantial contribution, they encounter numerous challenges, including markedly lower incomes compared to the national average.[2]

In 2022, the average household income in Malaysia was at approximately RM8,500 per month.[3] However, the Auditor General's Report for that year revealed that nearly a quarter of the 77,275 rice farmers earned an average of less than RM600 per month—almost RM2,000 below the poverty income line.[4] This income disparity heightens their risk of malnutrition and compounds issues related to land disputes, displacement, volatile market prices and exposure to harmful pesticides, all of which jeopardise their health and livelihood, and access to a clean environment.

HIGH-PROFIT FARMING: AT WHAT COST?

In 2020, Malaysia was ranked 43rd globally and second in ASEAN on the Global Food Security Index (GFSI) by The Economist Intelligence Unit. This ranking highlights the country's capability in ensuring food security. To support farmers affected by the pandemic, the government allocated RM62mil in 2020.[5]

The agricultural sector in Malaysia is also experiencing rapid digitalisation, particularly under the 12th Malaysia Plan (RMKe-12).[6] This shift presents both opportunities and challenges. While digital agriculture can enhance efficiency and productivity, it also raises concerns about potential impacts on farmers' health, especially in relation to existing threats such as pesticide exposure, which could be exacerbated by technologies like drone applications.

MARGINALISED FARMING COMMUNITIES

In 2022, Malaysia's agricultural trade totalled USD61.3bil, with exports reaching USD37.4bil and imports at USD23.9bil.[7] A significant portion of this trade is driven by the plantation sector, particularly the palm oil industry, which employs nearly half a million workers in Malaysia, approximately 80% of whom are migrants.[8] Despite the sector's economic importance, small-scale farmers and workers often endure low wages, irregular employment and inadequate social

NISHA KUMARAVEL is a licensed counselor, communications specialist and project coordinator, advocating for labour and farmer's rights, as well as agricultural and political reform. In her spare time, she enjoys reading and caring for her 13 unruly cats.

FOOTNOTES

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[2] https://www.statista.com/statistics/720291/malaysia-average-monthly-salary-in-agriculture-forestry-and-fishing-industry/#:~:text=In%202022%2C%20the%20average%20monthly,was%20below%20the%20national%20average.

[3] https://www.thestar.com.my/news/nation/2023/07/28/malaysia039s-mean-household-income-increased-to-rm8479-in-2022-says-stats-dept

[4] https://www.nst.com.my/news/nation/2023/11/981260/2022-ags-report-almost-quarter-rice-farmers-earning-below-rm600-monthly#:~:text=KUALA%20LUMPUR%3A%20The%202022%20Auditor,rice%20farmers%20in%20the%20country

[5] https://www.mof.gov.my/portal/en/news/press-citations/govt-provides-rm2-6-billion-for-subsidies-incentives-for-paddy-farmers-fishermen

[6] https://rmke12.ekonomi.gov.my/en/information/faq/economy

“Indigenous farming communities in Malaysia… are often excluded from decision-making processes related to agricultural policies, despite their crucial role in food production.”

protections. Migrant farm workers face additional barriers, including language difficulties, limited access to social services, debt bondage, deceptive recruitment practices, passport retention, restricted access to legal protection and experiences of discrimination and stigma. Furthermore, the plantation sector has one of the highest rates of workplace accidents and fatalities among all industrial sectors in Malaysia.[9]

The Covid-19 pandemic further exposed the vulnerabilities of farmers, particularly those in low-income households in rural areas. With strict movement restrictions in place, many struggled to access markets to sell their produce, leading to significant income losses and increased reliance on informal credit systems, often with high-interest rates.[10] The pandemic also exacerbated deteriorating living conditions as farmers faced job losses, unpaid wages and irregular work arrangements, leaving many without a stable source of income.

Indigenous farming communities in Malaysia also face substantial challenges, including the loss of their rights, resources and sacred lands.[11] These communities are often excluded from decision-making processes related to agricultural policies, despite their crucial role in food production. Encroachment into their forests for development and resource extraction not only threatens their traditional way of life, but worsens issues such as lack of health and nutrition. Moreover, the lack of consultation with these communities in policy formulation results in agricultural plans that fail to consider their needs and perspectives.

THREATS TO THE RIGHTS OF FARMERS

Large agricultural conglomerates wield significant control over the market, often prioritising profit over the welfare of farmers. This concentration of power can lead to land grabbing, unfair contract terms, limited market access for smallholders and pressure on farmers to adopt practices that may not align with sustainable agriculture principles. Exploitation by middlemen, whom many farmers rely on as intermediaries to access markets, exacerbates these issues. Informal and migrant workers, lacking bargaining power and access to market information, are particularly affected by such exploitative practices.

Climate change compounds these challenges, with its impacts becoming increasingly evident across Malaysia. Extreme weather events, such as unpredictable rainfall patterns, prolonged droughts and severe flooding, disrupt agricultural productivity.[12] These climatic shifts affect crop yields, degrade soil quality and increase the incidence of pests and diseases.

The intensive use of pesticides in agriculture is a major concern, posing severe health risks to farmers, particularly those without formal training in safe handling practices. Informal and migrant workers, often kept unaware of their rights and safety regulations, are especially vulnerable to harmful pesticide exposure, which can lead to serious health and environmental consequences.[13]

The government wants to use digital tools to modernise farming—the National Agro-Food Policy (2021-2030) highlights digitalisation as a key factor in modernising agriculture, with tools like precision farming, drones and data analytics.[14] However, not all farmers can benefit from these tools because they are expensive, difficult to use or require good internet connection.

SAFEGUARDING FARMERS’ RIGHTS

Strengthening labour protections for informal and migrant agricultural workers in Malaysia is crucial. This entails amending labour laws to extend coverage to these workers and implementing targeted programmes to raise awareness about their rights. Providing legal support and improving enforcement mechanisms can help ensure fair treatment and better working conditions.

Creating a price stabilisation fund is vital for Malaysian farmers, especially those in the palm oil and rice sectors, who are vulnerable to volatile international prices. This fund would offer financial assistance during periods of low market prices, helping to stabilise incomes and mitigate the risk of debt, thus supporting long-term agricultural stability.

The policymaking process should also involve food-producing communities, smallholder farmers and indigenous peoples through active consultation and participation in policy development. Only then can there be effective and inclusive policies.

Collaboration between the Malaysian government and the private sector is needed to provide affordable and accessible digital tools for small-scale and informal farmers. Initiatives should include subsidies for digital equipment, training programmes in local languages and investments in rural internet infrastructure to enhance farmers’ access to technology.

By prioritising inclusivity and fairness, we can ensure that the digital revolution in agriculture is inclusive, sustainable and just.

[7] https://www.trade.gov/country-commercial-guides/malaysia-agricultural-sector

[8] https://mbhr.iom.int/en/resources/reports/cost-hope-stories-migrant-workers-palm-oil-plantations-malaysia#:~:text=Palm%20oil%20production%20employs%20almost,%2C%20India%2C%20Nepal%20and%20Bangladesh

[9] https://www.researchgate.net/publication/336287036_Occupational_Health_and_Safety_in_the_Palm_Oil_Industry_A_Systematic_Review

[10] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10158762/

[11] https://www.amnesty.org/en/wp-content/uploads/2021/05/ASA2894242018ENGLISH.pdf

[12] https://www.researchgate.net/publication/329642223_CLIMATE_CHANGE_SCENARIOS_IN_MALAYSIA_ENGAGING_THE_PUBLIC

[13] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7061447/

[14] https://www.kpkm.gov.my/en/agro-food-policy/national-agrofood-policy

PENANG'S FRENCH CONNECTION OF EDUCATION AND CULTURE

BY FIRDAOUS BOUHASSOUN

"Then, it was Penang. On a morning of emerald and gold, the city rose from the sea like the miraculous finery of a forgotten queen. Thatched houses rose from the slopes, Chinese temples reached for the sky, and mosques with bulbous domes bore witness to another faith. The narrow, winding streets were teeming with a multi-coloured crowd of Chinese, Malays, Indians, Arabs and Europeans. The scent of spices and flowers wafted through the air, and the high-pitched cries of hawkers pierced the hubbub."

André Malraux, *La Condition Humaine* [1]

1

CAPTIONS

1. The French trio, Marsu, on stage at Gurney Plaza.

2. People practising breathing exercises and relaxing at Alliance Française de Penang.

3. Serge Périchon talking about photography and showing us pictures at Alliance Française de Penang.

4. The Church of the Immaculate Conception in Pulau Tikus.

Photos by Firdaous Bouhassoun

WITH ITS PICTURESQUE and eclectic tones, this extract bears witness to France's long-standing attraction to the island of Penang, and its cosmopolitan and multi-faith identity. Fast forward to 2018, we saw the signing of a Memorandum of Understanding (MOU) to link a French and a Malaysian city—Arles and Penang—both aspiring to cooperate closely in the arts, culture, heritage and social development.[2]

As it is, French heritage can be seen in many parts of the island, from Church Street to Bishop Street, including renowned schools such as Convent Light Street and St. Xavier's Institution (SXI).

The presence of the French on the island dates back to the arrival of Francis Light, a British explorer to George Town in 1786. Very early on, Catholic missionaries from the Missions Étrangères de Paris (MEP), a Catholic apostolic society founded in Paris in 1663, arrived in Penang after a long and perilous journey. Their main aim was to build churches as well as a large number of schools for both boys and girls. In addition to this dual educational and religious dimension, they played an active role in the city's economic development. Their heritage in Penang is scattered all over the island, as well as in Butterworth.

Convent Light Street, a school that is now no longer operating, was the oldest girls' school in Southeast Asia. It was founded by members of the Congregation of the Sisters of the Child Jesus at the request of the parish priests in 1852, and was one of the most renowned missionary schools on the island. These sisters pioneered female education in the country. As many as 19 schools were founded by French missionaries, including SXI and Convent Pulau Tikus—of these, 11 are still in operation in Penang.

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THE ALLIANCE FRANÇAISE DE PENANG

The Alliance Française de Penang (AFP), the beating heart of French language and culture in the region, was founded in 1962 by a group of locals who loved France and its culture. They had studied in European universities (France, England, etc.) and on their return to Penang, founded a cultural and social centre. The idea was to replicate certain aspects of the European way of life which they had experienced. A year before the AFP came into being, its twin, the Alliance Française de KL, was founded.

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Throughout the year, the AFP organises many cultural events, from French film screenings and typical French breakfasts with croissants and pains au chocolat to workshops on the art of improvisation. Working closely with the French Embassy in Malaysia and the Alliance Française de KL, AFP promotes French language and culture in northern Malaysia.

THE 2024 FRENCH FESTIVAL

This year's French Festival saw two weeks packed with activities and performances from 11 to 23 June 2024. Organised in partnership with the French Embassy in KL and the Alliance Française, this festival showcased the best of French arts, music and heritage.

With the support of partners like Penang Hidden Gems, G Hotel, Gurney Plaza, GSC International Screens and Monin, the festival offered something for everyone. Music enthusiasts enjoyed a captivating chamber music concert at The Blue Mansion and a free concert by the French group, Marsu. For art lovers, Serge Périchon's exquisite exhibition, "The Beauty of the Sporting Gesture" and his photography masterclass were a few of the highlights. The festival also included a pétanque tournament, VR experiences, and additional photography and theatre masterclasses.

History buffs and those curious about Penang's French heritage explored the city through two specially curated French heritage trails. The first trail delved into George Town's French history, including visits to significant landmarks like the Church of the Assumption. The second trail ventured into Pulau Tikus, offering a glimpse into the area's French heritage.

Clearly, the long-standing relationship between Malaysia and France is not just limited by the governments' mutual respect and cooperation on the diplomatic level, but also the friendship of the peoples of the two countries.

FOOTNOTES

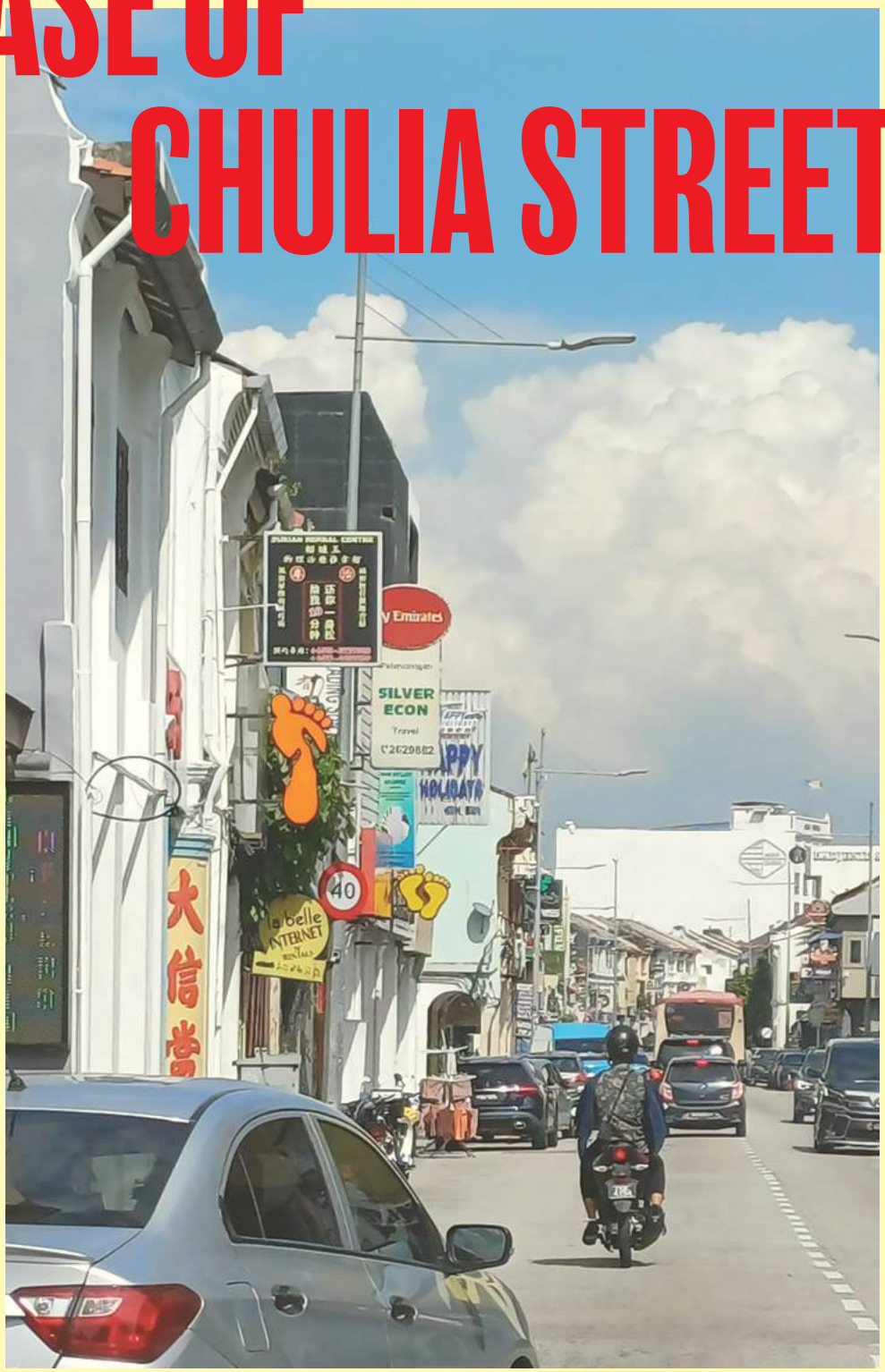
[1] Excerpt from *La Condition Humaine,* a French novel published in 1933 written by André Malraux.

[2] https://www.malaysiakini.com/news/427995

FIRDAOUS BOUHASSOUN is a research student at Lund University in Sweden. Her main interest is the environmental issues across the world, especially in Northern and Eastern Africa. Besides her studies, she works in an NGO whose aim is to preserve the cultural heritage in North Africa and in the Middle East.

ROAD (UN)SAFETY IN GEORGE TOWN

THE CASE OF CHULIA STREET



BY
JOAN LIAO

"IF YOU CAN drive in Penang," my parents say, "you can drive anywhere in Malaysia." My Sabahan parents regard Penang roads as notorious for out-of-town drivers—its uneven lane widths that narrow and widen at whim, its busy roads swarmed with vehicles large, small and everything in between, and its narrow and often blocked pedestrian five-foot ways. For non-Penang drivers, safely navigating Penang roads can be considered a miracle.

Chulia Street is the epitome of Penang's road condition. A major transportation thoroughfare through the centre of George Town, Chulia Street hosts centres of commerce by day and lively entertainment activities by night. As evidence of how chaotic this street can be, I'll take you on a journey down Chulia, by car and by foot, to explore what makes it a difficult and hostile road to navigate.

THE CHULIA STREET STREETSCAPE

Chulia Street is 950m long and bi-directional with two-lanes stretching from Penang Road in the west to Beach Street in the east. It runs parallel to Campbell Street to the south and intersects with Pitt Street midway. The street features no pavements for most of its length. Instead, arcades, known as five-foot ways, function as a sidewalk for pedestrians.

Six RapidPenang bus routes go through Chulia Street with four bus stops along the way—the Banana Boutique stop, the Love Lane stop, the Restoran Kapitan stop and the Little India stop. It is a major route for buses going between the Weld Quay bus terminal and the KOMTAR bus terminal.

Architecturally, the whole length is dominated by Strait Settlement-style shophouses, and lined by many heritage buildings, such as the Kapitan Keling Mosque and Ng Fook Thong Temple. Part of the George Town UNESCO Heritage site, the street also hosts hostels, restaurants and bars, making it a major destination for tourists and leisure seekers.

DRIVING ON CHULIA

When driving down Chulia Street, the volume of mixed traffic is immediately noticeable—pedestrians walking along parked cars outside the five-foot way, pedestrians crossing the roads appearing out from behind cars, cyclists and trishaw riders squeezing in tight spaces between parked cars and moving traffic, cars coming in and out of branching roads, the car ahead of you slowing down for the bus stopping at its stop, and motorcycles weaving between you at high speed to prevent getting stuck in traffic.

For many Penangites, these are usual conditions along Chulia Street and across Penang. Be that as it may, mixed traffic moving at different speeds is far from ideal for the safety of road users. According to Charles Marohn, founder of Strong Towns, a town planning advocacy organisation, roadways can be simplified into two categories based off of their function. A "road" is a wide roadway with segregated modes of traffic that allows a large volume of vehicles to move through it at high speed with limited points of intersection. A "street" is a destination, with shops and homes flanking the roadway, narrower lanes and more intersections. A "stroad" however, is a hybrid of a road and a street, where wider lanes and high traffic flow and speed is mixed with a lack of proper traffic segregation, having many intersecting points, and with vehicles pulling in and out of parking. Marohn considers stroads to be dangerous due to the improper mixing of design characteristics of street and road. Chulia Street, with its many branching streets and alleys, wide lanes, unenforced roadside parking and cargo unloading, and unsegregated traffic, is a chaotic and unsafe environment for motorists and pedestrians alike.

CHULIA ON FOOT

Walking along Chulia Street, the five-foot way gives ample shade from the blistering hot sun. However, you may have to weave in and out of it as many five-foot ways are blocked by motorcycles parked under the shade, by merchandise racks or tables and seating put out by shop owners, or by cargo left by labourers. While the local council has launched a campaign to clear obstructions from Chulia Street's five-foot ways in 2019, lack of enforcement has seen these gradually pile up again. Navigating the different levels can be difficult as well, as the steps are often steep for those with mobility issues, and impossible for those on wheelchairs.

Almost a kilometre long, Chulia has only four marked crosswalks, one with signage at the intersection with Love Lane. As such, many people still cross outside the designated crosswalks, putting them at risk from speeding motorists whose sightlines are blocked by improperly parked vehicles—even around crosswalks.

The lack of proper pedestrian infrastructure, the long crossing distances and the fast-moving traffic found in Chulia Street are common characteristics of stroads. For road safety designers, a key aspect of ensuring the safety of people outside of vehicles is to reduce traffic speed. Lowering the speed of the vehicle at impact with people from 50 to 30km/h greatly increases the chances of survival from less than 50% to 90%. Despite recent efforts to reduce speed limits in the George Town heritage enclave to 40km/h, the design of Chulia Street often encourages faster driving.

MAKING CHULIA SAFER

Traffic calming measures limit vehicle speed by retrofitting roadways—lane narrowing, speed humps, raised crosswalks or intersections, curb extensions at crossings, and adding curves (or chicanes). These street designs encourage people to drive slower.

Road safety policies should properly segregate modes of transport to reduce clashes between pedestrians, cyclists and vehicles. This involves building safe sidewalks, installing bollards and creating dedicated lanes for bicycles.

Improving road safety can start off with enforcing roadside parking penalties. In fact, most of Chulia Street is not marked for parking.

Once parked vehicles are limited, the city can explore a myriad of traffic calming options such as converting the roadside into a proper pavement for pedestrians, similar to Campbell Street, which has raised crosswalks at crossings.

Designating a bus lane for the frequent bus service is also possible. First, road planners must start off by identifying Chulia for what it should be, either a street or as a road; they can then design accordingly.

Road safety is a shared responsibility that extends beyond education and enforcement, but the fact of the matter is that not every person is a good road user nor are they immune to human error. Reactive enforcement policies cannot really dissuade accidents or improve road safety; these address issues only after accidents have happened. Road users, traffic enforcement, and road and vehicle designers must be equally responsible in building safer Penang roadways—not just for drivers, but for all its users.

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JOAN LIAO is a Sabahan who moved up from KL to experience living as a Penangnite. She also participates in advocacy, giving voice to those forgotten by society.

POEM

IN CONJUNCTION WITH the November issue's highlight on the water crisis that plagues the state, and the George Town Literary Festival happening from 29 November to 1 December, the editors of *Penang Monthly* have selected a few poems that explore the theme of water—its significance, its scarcity and its impact on our lives and environment.

COMPILED BY
PENANG MONTHLY

W

S O F A T E R

THE STRENGTH OF WATER

BY GAWANI GAONGEN

TRANSLATED FROM KANKANAEY BY THE AUTHOR

I.
Water is a beast, the great
Wave off Kanagawa, Boxing
Day tsunami, Yolanda's storm surge:
Merciless, unselective in what to take away,
It will not turn around at the cries of a mother
For her dead child be released from its clutches.
To plead you must seek for higher forces.
Or let go, surrender yourself to the invincible.

II.
For the needs of the village, there are springs
Steadfast, undefeated by the dry months.
"Do not make the water angry," they say.
No loud noise as you fetch it,
No spitting, no trashing,
No carrying of smelly things,
No one in mourning may go
(Someone fetches water for them in their time of grief.)
The springs are named, acknowledged
When the elders say their prayers—
A survival guide—a map of the places
Where water is life.

THIS POEM IS PART OF A SERIES PRODUCED VIA A PARTNERSHIP WITH THE GEORGE TOWN LITERARY FESTIVAL IN 2022.

WATER

BY
RALPH WALDO
EMERSON

The water understands
Civilization well;
It wets my foot, but prettily,
It chills my life, but wittily,
It is not disconcerted,
It is not broken-hearted:
Well used, it decketh joy,
Adorneth, doubleth joy:
Ill used, it will destroy,
In perfect time and measure
With a face of golden pleasure
Elegantly destroy.

RAIN

BY
MUHAMMAD
HAJI
SALLEH

Suddenly they came, the mid-year *padi* rains,
falling slanted among the dried *lalang*
and into the branch-drains of the brown canals;
The big regular drops falling at their own rhythm
became the overwhelming sound of an insistent tempo.

It woke up the child in the *sarong* cradle
and the old resting father.
Water has come. He looked out into the sheet of rain
descending along the *atap* eaves.
The rivulets carried the flattened straw
and the dust of the drought,
in their dark grey flowing threads
slithering to the depressions in the ground.

Thin dry ducks quacked
splashed by the strange rain
and chickens ran from under the trees.

It was the beginning of an answer,
Pak Usin's dark skinned muscles quivered.
Rain slapped the leaves and bent the young coconuts,
shook the drought of its death-dust
and swept the remains of harvest rubbish.

For this season they collected hopes again,
carried them under cover from the heat to this day,
the rain fell and wetted their praying throats.

CHINESE LANGUAGE PUBLISHING IN MALAYSIA SHOWS SMALL YET VITAL GROWTH

BY PAN YI CHIEH

Pan Yi Chieh is curator for the Mandarin panel in this year's George Town Literary Festival (GTLF). In this article, and in the panel, she talks about the challenges and prospects of the Chinese language publishing industry in Malaysia.

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WHILE CHINESE LANGUAGE publishing has been long-standing in Malaysia, its market remains small. According to Perpustakaan Negara Malaysia, the total number of publications in 2021 in Malaysia was 13,655; from a survey, we find that only approximately 130 books published in 2023, including reprints and new books, were in the Chinese language.[1]

Books have been written and published in Mandarin since the first Chinese immigrants stepped foot in Malaya. In the early colonial period, the educated Chinese began documenting local history and culture, providing valuable insights into local Malay customs and traditions. Many early writers taught in Chinese schools across British Malaya.

By the late 19th century, Chinese newspapers were functioning as an important and organised platform for the community to learn about issues happening around them. *Kwong Wah Yit Poh,* established in the early 20th century, remains the longest-surviving Chinese newspaper in the world. Today, Chinese newspapers continue to play a vital role in promoting Malaysian Chinese literature. For example, the Malaysia Hua Zong Literature Award, established by Sin Chew Daily in 1991 and held biannually, is regarded as the most prestigious award in Malaysia, encompassing various genres such as literature, novel, prose and poetry. For emerging writers, awards such as this help enhance their visibility in local and international markets. Additionally, Chinese associations and university publishing houses often fund publications related to history and culture.

Established in 1999, Mentor Publishing is one of Malaysia's largest and most influential Chinese publishing houses, whose publications cover a wide range of topics including finance, editorials, literature, popular culture, youth literature and biographies. Building on their existing strength in the printing industry, Mentor Publishing has also ventured into multimedia and digital publishing to keep up with the times.[2]

GOT ONE PUBLISHER – 20 YEARS OF DEDICATION

Based in KL, Got One Publisher has a track record of producing high-quality Malaysian Chinese literature. Chen Lin Loong, the current editor-in-chief, co-founded the company with friends in 2003. At a time when Malaysian Chinese literature was often thought of as passé and stale by a pool of readers that was already minuscule, Lin Loong pressed on out of passion.

As a writer and poet himself, Lin Loong is well aware of the challenges fellow Chinese language writers in Malaysia face: a small readership pool and publishing ecosystem, scarce interest in local publications, low quality printing and lacklustre designs. This has led many to seek opportunities in larger markets like Taiwan. Lately, however, with the availability of digital tools to reach broader audiences in the local and overseas markets, there have been marked improvements for Chinese language writers in Malaysia.

Though small, Got One Publisher is now a reputable publisher that actively engages with local writers to explore various topics such as urban issues, identity and daily experiences. By focusing their

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FOOTNOTES

[1] 葉福炎Yap Hock Yam, January 2, 2024, 馬華出版2023年回顧、觀察與分析 (The Reflections, Observation and Analysis of Malaysian Chinese Publishing in 2023), Sin Chew Daily.

[2] April 17, 2024, 與馬來西亞季風帶合併, 大將文化涉足電子多媒體 Merged with Monsoon Books, Dajiang Culture Is Venturing into Multimedia Content Creation.

efforts on improving the editing and layout designs, they have also enhanced public interest in Malaysian Chinese literature. Over the past two decades, Got One Publisher's three part-time staff, including Lin Loong, published nearly 200 literary works.

In the Mandarin panel planned for GTLF 2024, we revisit the same question: Do these challenges still persist? Lin Loong, who received the first prize in the prose and poem category and an Honourable Mention in the novel category at the Malaysia Hua Zong Literature Award, believes that having more small-scale publishers exploring different subjects and offering professional support to writers—especially those writing about the humanities—can be immensely helpful in nurturing both readers and the ecosystem.

BOOK ISLAND –GROWING WITH SOCIETY

In Malaysia, Chinese language books are primarily distributed through large chain bookstores such as POPULAR Bookstore. However, it can be challenging for new and lesser-known authors, particularly self-funded ones, to get their books into these. This is where support from small-scale or indie bookstores have become increasingly important. With the rise in popularity of online bookstores, physical bookstores have also had to actively engage with their readers to remain relevant.

Book Island @ COEX in Penang is an excellent example of an indie publisher bridging the gap with their readers. In 2014, Ch'ng Kar Guan and Chong Lee Choo, both veterans in Chinese journalism, founded Heitu Design for graphic design, publishing and curating exhibitions. The same year, they established *Penang City Eye*, a Chinese-medium magazine focusing on community, lifestyle and culture.

With the understanding that bookstores are hard to sustain in a world where the reading population is shrinking, Kar Guan and Lee Choo established Book Island, which now calls the dynamic and experimental cultural hub, COEX @ Kilang Besi, home. This decision is an astute one, as it places them in the paths of tourists and visitors wandering through the downtown area.

Thanks to having a good eye for design and curation, the couple turned the bookstore with an accompanying exhibition space into a warm and cozy environment for book lovers to trawl for the latest publications. In addition to regular local customers, including passionate readers and researchers, Book Island has also managed to attract tourists from Hong Kong and China seeking local publications.

Its team of six work on commissioned design and publication projects, while also handling the magazine and managing a bookstore. Taking a step further to engage the community and spur interest in the issues explored in their books, Book Island also organises events to enhance public understanding in the topics of culture, literature, folklore and religion.

"In doing this, we realise that it isn't necessarily true that locals don't read; we just haven't discovered the right way to engage them. Through organising these cultural events, we have been able to identify our customers; and when choosing which books to order and display in our store, we always envision them in our mind," Kar Guan enthuses.

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CAPTIONS

1. Chen Lin Loong (left), Chong Lee Choo (centre) and Ch'ng Kar Guan (right) at the Malaysia Hua Zong Literature Award held in 2024.

Credit: Siah Li Peng

2. Book Island organises a variety of events to support young writers both in Malaysia and internationally.

Credit: Ch'ng Kar Guan

3. Book Island.

Credit: Pan Yi Chieh

4. Books from Got One Publisher (left). The first book published in 2003. This essay collection won the Liang Shih-Chiu Literary Award in Taiwan in 2024 (right).

5. This trolley has supported Got One Publisher for more than 20 years.

Credit: Got One Publisher

PAN YI CHIEH is a research analyst at Penang Institute who was born in Taiwan but now lives in Penang. She is proud to be nurtured by the two beautiful islands she regards as home.

A RECAP OF GEORGE TOWN LITERARY FESTIVAL 2023

BY YEE HENG YEH

> "Today, GTLF has established itself as a cornerstone of Malaysia's cultural tapestry and a global nexus for literature enthusiasts."

AT THE END of every November, there occurs a sudden influx of visitors to the UNESCO World Heritage Site of George Town, Penang. These are people wishing to take part in the George Town Literary Festival (GTLF), which now stands as Malaysia's foremost international literary event (and also its longest-running!). Hosted annually across various venues in the heart of the city, this festival is a testament to the city's rich heritage and historical significance.

A weekend extravaganza that brings in writers, performers, translators, publishers and readers, GTLF now boasts visitors numbering in the thousands from dozens of countries. The festival won the London Book Fair International Excellence Award in 2018 (thus far the only festival in Penang to receive such international recognition), and continues to celebrate the literary expressions that shape our world.

Last year's 13th edition was no exception—funded by the state government of Penang and produced by Penang Convention & Exhibition Bureau (PCEB) for the eighth consecutive year, it saw close to 8,000 festival attendees (this figure translates to approximately RM8.7mil in Estimated Economic Impact). The theme then, "Terra Incognita", promised a venture into the uncharted realms of literature and human expression, and was directed by Pauline Fan alongside curators Adriana Nordin Manan, Florence Kuek and M. Navin.

Over the years, each iteration of GTLF has been broaching the unknown, as the festival constantly expands and reinvents itself. From the grassroots, occa-

sionally punk-rock vibe of earlier years, to the more recent shift of focus to translation and multilingualism, the festival has shown itself adaptable to the topical needs of the nation. It is refreshing to see that this adaptability applies even in its exploration of formats.

Besides the usual line-up of lectures, book launches, panel discussions and readings, 2023 also saw the inclusion of a staged play reading; "Creative Huddles", where audiences could engage in direct conversation with literary figures; speed pitching sessions, where writers get five minutes to pitch their book to a literary agency; an evening of "anti-entertainment" that meshes poetry and soundscape; as well as two exhibitions, one a tribute to the iconic Brazilian author Clarice Lispector, and the other an ode to the art of letter writing itself, displaying over 80 physical letters in various languages and forms.

We see this also in the topics included: one panel explores the form of illustrated stories, acknowledging them, too, not just as a visual art form, but a literary one. And I haven't even begun talking about parallel partner events like "A Wasteland of Malaysian Poetry in English" (an audio exhibition) or "Burden of Proof" (a theatre production on sexual violence); these programmes further include readings, talks, workshops, film screenings and an open mic, providing space for exchange between not just writers, but local creatives more generally.

The opening ceremony itself received nearly 200 people in attendance, and was officiated by Penang Chief Minister, Chow Kon Yeow. He emphasised the importance of literature in today's digital age, urging individuals to rediscover its significance and nurture the habit of reading. The ceremony also saw the launch of the third issue of *Muara*, a publication that was first initiated to commemorate the 10th anniversary of GTLF, but has now evolved into an annual collection showcasing writing from diverse authors across Malaysia and the region. That year's edition, edited by Wan Nor Azriq and Deborah Augustin, examined the theme "Borders/Perbatasan", and also features the winners of the Muara Writing Prize, which aims to nurture emerging Malaysian writers.

Naturally, book launches abound. It was exciting to see the range of local writings published in a single year: short story collections that ran the gamut from fantasy to social issues, to multilingual writings reflecting on Borneo's oral traditions, and a monograph that looked back on the life and work of Salleh Ben Joned. Publishers Maya Press and Buku Fixi also each launched multiple books in a single session—a smart move to broaden and cross-pollinate the reader base across genres and languages. These served as a nice complement to panels that pondered the trajectory of the literary scene here—there were even discussions specific to local literature written in Mandarin and Tamil. All this, and more, cemented GTLF's vital presence as a rare platform for local writers to engage with the wider, even global, literary community.

Of course, one main draw of the festival is always the big names of world literature. Veeraporn Nitiprapha and her translator Kong Rithdee offered a unique perspective on the intricate relationship between memory, pop culture and contemporary Thai folklore. Both Geoff Dyer and Wu Ming-Yi, in their respective sessions, shared insights into their own processes and journeys as writers—and how these informed their subjects and stylistic approaches—while Yuvan Chandrasekhar unpacked the complexities of his unconventional storytelling and alternate realities.

To facilitate cultural exchanges, there were panels featuring both international and Malaysian writers. One of the most popular sessions starred Edouard Louis and Tash Aw (a big name in his own right)—which drew in more than 200 attendees to listen to their eloquent conversation about the inextricable links between personal experiences and wider systems of power. Moreover, the clearest instance of such cross-border interchange was an initiative that brought two Malaysian poets and two UK poets together, culminating in a reading of new work produced through this collaboration.

GTLF 2023 certainly offered plenty of food for thought in four days, building networks and providing invaluable exposure on a truly international scale. This applied not just to local writers but to the reading public and students—whether they were there to share their work in a reading, to volunteer or simply attend. It may be easy to forget GTLF's humble beginnings in 2011 when it showcased only five writers—and the thought, effort and funding required for the festival to go from strength to strength, year by year—but it's a journey we should all appreciate.

Today, GTLF has established itself as a cornerstone of Malaysia's cultural tapestry and a global nexus for literature enthusiasts—one that the public may freely access! Its steadfast dedication to literary expression and a vibrant reading culture is truly commendable.

The festival returns for the 14th time from 29 November to 1 December 2024. This year's festival presents an intriguing fusion of creative and intellectual exchanges. Penang Institute has taken over the organising of this festival, and this time with the theme, "Word on the Street", it celebrates the unsung voices, perspectives and wisdom permeating public spaces. One will be able to mingle with prominent Malaysian authors such as Tan Twan Eng, Shih-Li Kow, Aishah Zainal and Hanna Alkaf. International writers include Jeroen Olyslaegers from Belgium, Sheung-King from Canada, who is nominated for the Governor General's Award, Clément Baloup from France and Kevin Chen from Taiwan.

Some must-attend sessions include "So, word on the street is", which talks about gossip in literature, "Suite Conversations" at Maugham Suite, E&O Hotel with Tan Twan Eng, movies under the stars at the historical Khoo Kongsi courtyard, or add on to your TBR list from the multiple book launches.

Penang Institute will also be holding GTLF Plus events throughout the year to celebrate the literary scene in Penang, letting the rejoicing culminate at the end of November, with the annual GTLF within the UNESCO World Heritage Site.

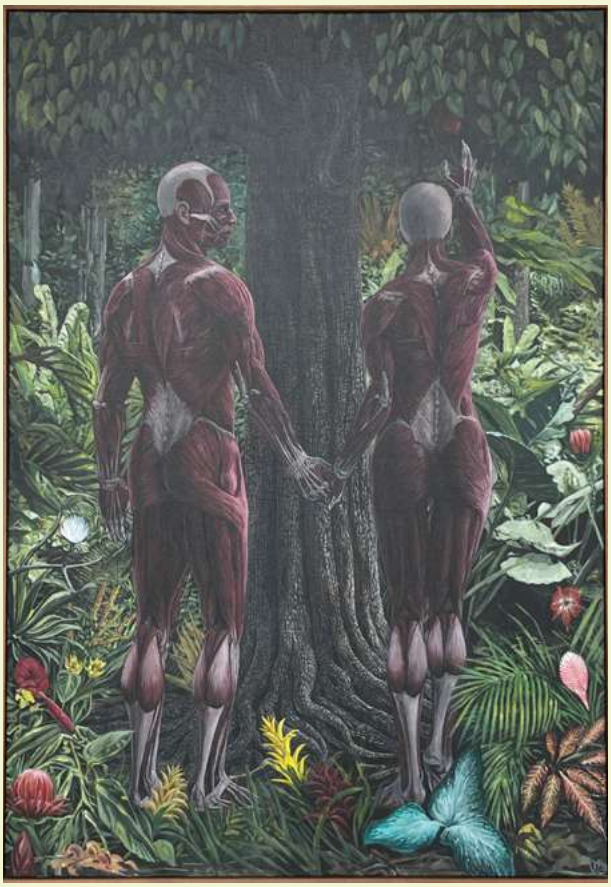
> **"... this time with the theme, "Word on the Street", it celebrates the unsung voices, perspectives and wisdom permeating public spaces."**

YEE HENG YEH is a writer and Mandarin-to-English translator whose work has been featured in The KITA! Podcast, adda, Strange Horizons, NutMag, Nashville Review and Guernica. You can find him on X at @HengYeh42.

IMAGININGS OF NATIONHOOD

ON "NEGARAKU", A COLLECTOR'S SHOW BY BINGLEY SIM AND IMA NORBINSHA

BY YEE HENG YEH



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"I propose the following definition of the nation: it is an imagined political community [...] It is imagined because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion."

— Benedict Anderson
Imagined Communities: Reflections on the Origin and Spread of Nationalism

A NATION IS, first and foremost, the story of an idea. That's what we mean by "nation-building"—what's being built is, in fact, a story of Malaysia, one that perhaps exists more distinctly in our heads than anywhere else. After all, reality is too messy and volatile to be contained by a single story. But what this story does is supply a sense of identity and direction—who were we once, who are we now and who do we want to be?

This story is taught through history textbooks, essay topics, drawing competitions and, of course, the national anthem. Now, the exhibition "negaraku" may borrow its title from the anthem, but its version of the story hardly toes the line of official sources—each artwork offers its slice of truth, which, put together, forms a more complete picture. Each piece gains its own political context and subtext, simply by virtue of its position herein.

We begin with works that deal with the colonial past, like the sculpture "Rentap" by Mat Ali, featuring the famed warrior frozen in mid-strike, a rallying cry forged in metal and grounded by stone. Or "The Great Post-Colonial Landscape" by Jalaini Abu Hassan, which shows a lone figure in a landscape streaked with bitumen black, with only the promise of blue sky in a small triangle near the top of the frame… That horizon, perhaps, is the visual representation of the "post" in "post-colonial".

But is that a horizon we've reached? It is undeniable and unfortunate that our national consciousness remains very much moulded by the colonial policy of "divide and rule", inculcating in us the categorical separations of race. Edroger Rosili's "Let's Do This" becomes a snapshot of the moment right before this division: Adam and Eve, stripped of skin (colour), only flesh

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and blood—and Eve reaching for that dangerous fruit. In the biblical story, shame is gained alongside that first bite of knowledge, shame born out of an awareness of difference, of the individual self and the other. It's not hard to see this in the Malaysian identity, too, where even unity is predicated upon an assumption of inherent differences in the first place. Paralleling this is a series of black-and-white paintings by Chang Yoong Chia titled "Red", "White", and "Blue", and evoking just as much. They suggest that colour only exists in the mind's eye—it is our imagination that colours our realities.

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Another link between our colonial history and the present? Our architecture—such as the Pudu Prison and the Sultan Abdul Samad Building, both constructed in the late 19th century. The former is the main subject of "Into the Jail" by Gan Sze Hooi, comprising three panels of wood. The façade is a flat illustration of the prison gate, but open it up and an extended scene bursts forth, filled with motion and angles: prisoners, officers, protestors and a faithful reproduction of the KL landscape behind them. By now, the artwork has become an

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archive of sorts, documenting what once stood there, seemingly immutable—the prison building was demolished in 2012, making way for a shopping mall… Who can resist consumerism's siren song? Certainly not us, if "Khalatida towards Kapitalism" is anything to go by. This artwork by Eddy Susanto is a life-size sculpture of a pig, with logos of brands and corporations imprinted on her very skin. Her hunger can never be satisfied, and neither can ours.

The Sultan Abdul Samad Building, on the other hand, serves as the backdrop of Najib Ahmad Bamadhaj's "Hope", with its mass congregation of yellow butterflies, an image sharpened by the presence of a few stray red ones. The allusion to the 2015 Bersih rally and its counter-protest adds another layer of history to the venue—the same way we add our own layer of perspective, from the present reality of a government led by Anwar Ibrahim, the past frontman of Reformasi. Has the butterfly flapped its wings enough to create a hurricane? We're still waiting to see.

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And so Malaysian politics seems to exist in a perpetual state of uncertainty and shadows, reflections and echoes. "Kau Sekutu atau Seteru" by Bayu Utomo Radjikin, the artwork that sparked Bingley Sim's journey as an art collector, exemplifies this best—what appears to be an 8ft, pitch-black canvas reveals, after closer observation, a fighter pilot mask, with glimmers of words—"sesal", "luka", "kasihan", "cinta"—floating to the surface at certain angles. Similarly, works like "Tribute to Uncertainty of Mind" by Khairudin Zainudin, "What's The Reason That We Choose" by Wong Ming Hao and "satu" by Arikwibowo Amril illustrate the murky turbulence that mires our political leaders. Party symbols and famous faces blend into each other, a confluence of history and future. In the puzzle fragments of these faces, it's striking how the eyes are often the most recognisable feature—maybe they are, indeed, the window to the soul. They stare back at us, almost questioning: Who is in power, really, after all this time? Who, in our minds, is the symbol of the nation?

What comes next in this story? Fadilah Karim's "Bubblegum" depicts a pregnant woman on a chair, but rather than looking at her baby bump, she stares up, again searching for that elusive future. The next chapter will be one written by future generations. Already they are taking shape in

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"100 Half-boiled Eggs" by Bibi Chew. Each resin egg encloses its unique silk knot—each child will grow up to change the world in their unique ways. Yet the silk knot suggests not just individual agency but also the red thread of fate—those life circumstances and factors are beyond their control. We see that each generation is shaped by the world as much as the world is shaped by them.

In the end, we return to the beginning. We face the founding father himself—in fact, not just one, but fifty Tunku Abdul Rahmans in a multiplicity of colours by Stephen Menon. After all, there are just as many versions of the story of Malaysia. The pairing of his selected quotes and modern road signs is a brilliant touch, suggesting that the sentiments he expressed so many years ago still resonate today, found in the fabric of today's symbols. We look to both for guidance on ways to move forward.

Ultimately, "negaraku" is not just a window into the nation's story, but more specifically, the nation as imagined by the artists, collectors Bingley Sim and Ima Norbinsha, and curator Ivan Gabriel. What's on display is a collective vision, an imagined concept made tangible and visible. All the better. A nation is better imagined when it's imagined together. It is art which creates space for these differing, even conflicting, versions to exist together—the same way diverse Malaysians do.

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CAPTIONS

1. Edroger Rosili's "Let's Do This".
2. Gan Sze Hooi's "Into The Jail".
3. Bayu Utomo Radjikin's "Kau Sekutu atau Seteru".
4. Chang Yoong Chia's "Yellow".
5. Visitor peering into the "Jail".
6. Mat Ali's "Rentap".
7. Stephen Menon's "The Journey: From Malaya to 1 Malaysia".
8. Bingley Sim.

YEE HENG YEH is a writer and Mandarin-to-English translator whose work has been featured in The KITA! Podcast, adda, Strange Horizons, NutMag, Nashville Review and Guernica. You can find him on X at @HengYeh42.

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