The ASEAN

The Road to Sustainable Cities

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THE INSIDE VIEW
ASEAN Smart Cities

SHIFTING CURRENTS
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An Urban Renewal

ASEAN SOCIO-CULTURAL COMMUNITY

Ministerial Bodies and Senior Officials

ASCC Council

Senior Officials' Committee for ASCC Council
Supports ASCC Council and facilitate collaboration of efforts among ASSC sectoral bodies

Diagram labels

- Rights of Women and Children — ACWC
- Women and Gender — ACW
- Labour — SLOM
- Civil Service — SOM-ACCSM
- Social Welfare and Development — SOMSWD
- Rural Development and Poverty Eradication — SOMRDPE
- AMMSWD
- AMMW
- ALMM
- ACCSM
- AMRDPE
- Sports — SOMS
- AMMS
- Health — SOMHD
- AHMM
- Education — SOM-ED
- ASED
- AMMDM
- ACDM
- AMMY
- Youth — SOMY
- COP-AADMER
- Disaster Management
- AMRI
- SOCA
- SOMRI
- COCI*
- AMCA
- SOMCA
- COP-AATHP
- AMME
- ASOEN
- COM
- Information
- Culture and Arts
- Transboundary Haze
- Environment

Legend

○ Ministerial Bodies   ● Sectoral Bodies   *) takes guidance from and reports to both AMCA and AMRI

AMRI-ASEAN Ministers Responsible for Information

AMCA-ASEAN Ministers Responsible for Culture and Arts

AMMY-ASEAN Ministerial Meeting on Youth

ASED-ASEAN Education Ministers Meeting

AMMS-ASEAN Ministerial Meeting on Sports

AMRDPE-ASEAN Ministers on Rural Development and Poverty Eradication

AMMSWD-ASEAN Ministerial Meeting on Social Welfare and Development

AMMW-ASEAN Ministerial Meeting on Women

ALMM-ASEAN Labour Ministers Meeting

ACCSM-The Heads of Civil Service Meeting for ASEAN Cooperation on Civil Service Matters

AHMM-ASEAN Health Ministers Meeting

AMMDM-ASEAN Ministerial Meeting on Disaster Management

COP-AADMER-Conference of the Parties to the ASEAN Agreement on Disaster Management and Emergency Response

AMME-ASEAN Ministerial Meeting on Environment

COP to AATHP-Conference of the Parties to the ASEAN Agreement on Transboundary Haze Pollution

SOMCA-Senior Officials Meeting on Culture and Arts

COCI-The ASEAN Committee for Culture and Information

SOMRI-Senior Officials Meeting Responsible for Information

SOMY-Senior Officials Meeting on Youth

SOMED-Senior Officials Meeting on Education

SOMS-Senior Officials Meeting on Sports

SOMRDPE-Senior Officials Meeting on Rural Development and Poverty Eradication

SOMSWD-Senior Officials Meeting on Social Welfare and Development

ACWC-ASEAN Commission on the Promotion and Protection of the Rights of Women and Children

ACW-ASEAN Committee on Women

SLOM-Senior Labour Officials Meeting

SOM-ACCSM-Senior Officials Meeting on ASEAN Cooperation on Civil Service Matters

SOMHD-Senior Officials Meeting on Health Development

ASOEN-ASEAN Senior Officials on the Environment

COM to AATHP-Committee under the Conference of Parties to the ASEAN Agreement on Transboundary Haze Pollution

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one vision
one identity
one community

Cover Illustration by **Fahrizal Aryanto** | Composed by **Kramakata**

A Note from the Editorial Team

This issue takes stock of ASEAN initiatives to turn cities—home to half of the region's populace—into habitable, sustainable, and resilient urban environments.

In an interview, ASEAN Secretary-General Dato Lim Jock Hoi highlights that transforming cities into smart ones, i.e. data-driven and technologically-enabled, represents a vital step towards improving people's quality of life in cities and addressing a multitude of urban problems, including disasters and pandemics. ASEAN Connectivity Division's Lim Chze Cheen and Benazir Syahril provide an overview of the regional frameworks and strategies developed to guide Member States in carrying out smart and sustainable urbanisation.

Non Arkaraprasertkul of Thailand's Digital Economy Promotion Agency Digital discusses the progress and challenges of establishing digital connectivity in the region, a key component of smart cities, and the opportunity-in-crisis that the COVID-19 pandemic presents for engineering a digital shift. Centre for Liveable Cities' Hugh Lim talks about ways to create pandemic- and climate-resilient cities, emphasising the role of smart solutions and an innovative population in swift pandemic response and recovery.

Along with mainstreaming smart technologies into urban systems, ASEAN also recognises the need to address the range of challenges caused by rapid urbanisation, including competition for limited resources, environmental degradation, and health problems.

UN-Habitat Executive Director Maimunah Mohd Sharif outlines the various forms of assistance—from urban policy development to technical support—that the UN-Habitat has rendered to improve living conditions in cities across Asia. ASEAN Socio-Cultural Community Department's Vong Sok and Dwight Jason Ronan discuss ongoing programmes, projects, and partnerships to promote clean and green urban spaces. Our editorial team looks at regional and national plans to solve road transport-induced air pollution and health issues.

Our Conversations section features remarkable individuals who launched their own initiatives to make their cities more liveable and sustainable. These include an app to address food waste, projects to transform "wasted" spaces like rooftops and abandoned infrastructures into organic farms and public green spaces, and urban garden projects.

Our Shifting Currents and Snapshots sections provide updates on ongoing ASEAN initiatives related to COVID-19, dengue, and cultural understanding. We also have a reflective essay from the University of the Philippines' Clement Camposano on how education administrators can make remote learning work for teachers and students, even post-pandemic.

The issue rounds off with four articles exploring the historical, literary and musical ties between Southeast Asia and India.

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The Inside View

ASEAN works towards smart and sustainable urbanisation

Hotel and office towers viewed from Waduk Melati, Jakarta, Indonesia

Viewpoint:
Dato Lim Jock Hoi
Secretary-General of ASEAN

ASEAN Secretary-General Dato Lim Jock Hoi talks to *The ASEAN* on the qualities and benefits of smart cities, as well as the ongoing initiatives to support the region's 26 major cities in developing, updating, and implementing their smart city action plans under the ASEAN Smart Cities Network initiative.

What characterises a smart city? **Secretary-General Lim:** A smart city harnesses technological as well as digital solutions and other innovative means to address urban challenges, create new opportunities, and continuously improve the quality of life of its people.

A smart city also promotes social and economic development alongside environmental sustainability through effective mechanisms to meet current and future challenges. As a city's natural ecosystem remains an important foundation of its development and competitive advantage, a smart city should be designed according to its unique characteristics and potential.

Why is technology considered the enabler to improving people's lives in cities? What other aspects constitute sustainable urban development? Secretary-General Lim: The COVID-19 pandemic has created an impetus for smart cities to embrace technology in addressing urban challenges and generating new sources of growth. This may invigorate more cities to make smart development the foundation of long-term urban planning. Technology is often considered an enabler, but today, technology will also be a differentiator and an accelerator.

It is critical for ASEAN to put in place policies that boost digital connectivity and encourage an innovative ecosystem. There is also a need to develop open data cooperation and strengthen digital data governance in the region. This aims to further enhance data management, facilitate harmonisation of data regulations and promote cross-data flows.

Smart city initiatives need more than just technology to succeed. It requires people-centred approaches, as well as close collaboration between different levels of government, the general public and the private sector. Collaboration on the design and implementation of smart city initiatives will help authorities to understand and incorporate the needs of various stakeholders, particularly vulnerable groups, and, instil a greater sense of ownership and stewardship of smart city projects.

At the regional level, the **ASEAN Smart Cities Network (ASCN)** provides a collaborative platform where cities work together towards the common goal of smart and sustainable urban development. Through this platform, the ASCN also continues to develop synergies with other relevant ASEAN initiatives, such as the **ASEAN Sustainable Urbanisation Strategy**, and strengthen smart city partnerships beyond the region. Such collaborations can bring about more tangible outcomes by pooling together the knowledge, expertise and resources on the requisite hardware and software for digital connectivity.

Plans (SCAPs); and (ii) the *Guidelines for ASCN Engagement with External Partners* which serves as reference to the terms and modalities for ASCN engagements and partnerships.

Different cities encounter different challenges. These could include the need for integrated planning, evidence-based planning, access to alternative sources of project finance, social inclusion, capacity building and technical feasibility, among others. Cities will need to find the right combination of technologies, policies, and partners to suit their own starting points and priorities. Collaborative partnerships involving public and private sectors as broader stakeholders, through the ASCN and other relevant platforms, can help bring about better solutions and value to the development of smart cities.

What are the priorities of the ASCN this year?
Secretary-General Lim: The ASCN has continued to strengthen the monitoring of progress for SCAPs, facilitate partnerships, develop projects that further improve the lives of ASEAN people, and promote new business opportunities in smart city development. This year, the ASCN has been looking into the possibility of developing an online portal and an ASEAN smart city investment toolkit.

The ASCN online portal aims to function as a common platform for ASCN cities to take stock of their SCAPs and update their priorities, build partnerships, and access important resources for smart city development.

The ASEAN smart city investment toolkit is envisaged to help cities understand various funding and financing options, assess the advantages and disadvantages of each, and identify strategies that best fit cities' respective contexts.

In November 2021, the Ministry of Transport and Infocommunications of Brunei Darussalam will be hosting the ASCN Conference with the theme of "The New Normal." The conference will focus on sharing experiences around how cities will address the new normal in a post COVID-19 environment. ∎

What has the network accomplished so far since it was created? What are the challenges to building smart cities, and how are these being addressed?
Secretary-General Lim: Since its establishment, the ASCN has grown from strength to strength. Around 50 projects have been developed and 40 partnerships have been forged. The ASCN has strengthened its institutional mechanisms to monitor these projects, foster existing partnerships, explore untapped potentials and build capacity to deliver smart city projects.

In 2020, the ASCN has endorsed: (i) the *ASCN Monitoring and Evaluation Framework* which provides a standardised approach to support ASCN cities by monitoring progress and preparing annual updates on the status of implementation of their Smart City Action

Promoting Smart and Sustainable Urbanisation in ASEAN
Progress and Challenges

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Cities are at the frontline of key global trends and challenges affecting the region, from pandemic to climate change and digitalisation to inclusive growth. Around half of ASEAN's people already live in urban areas, and by 2025, a further 70 million people in this region will be city dwellers. Rapid urbanisation would place increasing pressures on most of these cities that may not be adequately equipped to deal with a growing range of potential threats.

Pursuing smart and sustainable urbanisation in ASEAN can help cities to recover from and adapt to current challenges and better prepare for future problems, whether these are internal or external, short-term or long-term, expected or unexpected. Smart and sustainable urbanisation has therefore become an important part of ASEAN's efforts to raise the standards of living of its peoples and empower them to seize opportunities and tackle head on whatever challenges may arise in the coming years. Connecting urban areas can also strengthen regional production networks and promote inclusive growth.

Above
Johor Baru, Malaysia. One of 26 ASEAN Smart Cities (ASCN) Pilot Cities

Photo Credit: © Muhammad Syahid/Shutterstock

This is where enhancing ASEAN Connectivity and increasing investments in infrastructure are critical.

The COVID-19 pandemic has highlighted the promise and possibilities of smart and sustainable urbanisation. One key development is the need to use technology. Whether it is sustainable public transport options or low carbon technology solutions, innovation and technology will shape the future of cities in ASEAN. With technology redefining what is possible for cities to achieve, it is essential to build the capacity and capability of the region's human capital to seize this opportunity.

A mid-term review of the **Master Plan on ASEAN Connectivity (MPAC) 2025** conducted in 2020 showed the increasing relevance of connectivity in supporting the socio-economic recovery and strengthening the resilience of the ASEAN Member States and their cities as they emerge from the pandemic. This is also emphasised in the **ASEAN Comprehensive Recovery Framework**

(ACRF) adopted by ASEAN Leaders at the 37th ASEAN Summit in November 2020. The ACRF underscores the need to synergise ASEAN's initiatives in sustainable urbanisation and smart city development through the **ASEAN Sustainable Urbanisation Strategy (ASUS)** and the **ASEAN Smart Cities Network (ASCN)**.

The establishment of ASCN and ASUS in 2018 provided a platform to share best practices and generate more opportunities for growth, innovation, capacity-building, and inclusive sustainable urban development. The ASCN and ASUS share a similar framework and focus on six areas, namely: civic and social; health

and well-being; security; quality environment; built infrastructure; and industry and innovation.

Connecting cities across ASEAN through exchange of knowledge and expertise is one way to promote sustainable actions and solutions. In addition, cities' varying capacities and journeys in managing urban challenges provide opportunities for enhanced collaboration.

The prioritisation of actions and the development of ASUS toolkits had emerged from the finding that many cities in ASEAN lack a comprehensive long-term strategy to guide them in implementing their sustainable urbanisation actions or

> **The establishment of ASCN and ASUS in 2018 provided a platform to share best practices and generate more opportunities for growth, innovation, capacity-building, and inclusive sustainable urban development.**

lack the capacity to develop financially viable proposals. Cities can use the ASUS toolkits to prioritise their sustainable urbanisation actions as well as develop action plans or project proposals relevant to their unique contexts. Moreover, funders and investors often consider small-scale city projects unattractive due to the high transaction costs of evaluating proposals.

Developing smart and sustainable urbanisation requires a holistic approach. Every city is different. It is essential to appreciate the underlying fabric of a city, the systems they are in, and the risks they face. Understanding the specific challenges to a particular city and their potential impacts is vital for ensuring that the city can effectively respond to them. We can learn from the good practices around the world, which are emerging and evolving. There is thus a need for concerted multi-sectoral collaboration and partnerships among different government institutions, private sector, non-governmental organisations, international organisations, and other external partners.

Hence, ASEAN has collaborated with various partners, through ASCN and ASUS, to support cities across the region in developing action plans, undertaking city diagnostics, and developing technical project proposals, among other initiatives.

For instance, in collaboration with the United Nations Human Settlements Programme (UN-Habitat), ASEAN has been working with cities to undertake city diagnostic exercises towards developing city technical proposals. The city technical proposals will help cities in engaging

partners for further technical assistance, financing, and implementation.

In addition, ASEAN is working with the UN-Habitat in preparing for the ASEAN Sustainable Urbanisation Forum in the third quarter of 2021 and the Report on the State of Urbanisation in ASEAN to be completed by the end of the year. The Forum will serve as a multi-stakeholder platform for policy discussions and knowledge sharing. The Forum will also provide an opportunity for cities to engage partners to explore potential cooperation for city projects, refine and finalise the cities' technical proposals. Meanwhile, the Report on the State of Urbanisation in ASEAN is intended to give a more in-depth understanding of where ASEAN cities are in terms of sustainable urbanisation efforts and what can be done further to support national and local government endeavours in responding to the challenges and opportunities within the ASUS priority actions.

Achieving smart and sustainable urbanisation will not be easy. The cities need to look at their key threats, priorities, and goals and identify what resources are required to deliver their smart and sustainable urbanisation vision. It is also useful to assign roles and responsibilities for individual and collective actions over time and in the event of a shock. The implementation of ASEAN smart and sustainable urbanisation initiatives will continue to complement other ASEAN efforts on infrastructure, digital connectivity, the fourth industrial revolution, and mainstreaming gender equality and the rights of persons with disabilities.

Through collaborations and partnerships, ASEAN will develop a strong network of cities with a pipeline of smart and sustainable urbanisation projects that will benefit the peoples of ASEAN. ∎

Kuala Lumpur, Malaysia

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Capturing the Urban Opportunity in Southeast Asia

MAIMUNAH MOHD SHARIF
EXECUTIVE DIRECTOR, UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME (UN–HABITAT)

Executive Director Maimunah Mohd Sharif shares with *The ASEAN* how good urban governance is crucial to ensure urbanisation leads to equitable and sustainable growth.

Cities worldwide are urbanising at a rapid rate. Since 2007, cities have been home to more than half of the world's population. That share is projected to rise to 60 per cent by 2030 and to 70 per cent by 2050, making urbanisation one of the most significant and defining trends of the 21st century.

The speed and scale of urbanisation in ASEAN are quite striking. Today, more than half of the people in ASEAN live in urban areas, and an additional 70 million people are estimated to live in ASEAN cities by 2025, which is equivalent to more than the current population of all capital cities in ASEAN. Moreover, urbanisation in Southeast Asia is taking place across the urban-rural continuum, from the smallest and most remote communities to burgeoning megacities.

How we plan for, manage, and anticipate urbanisation will shape development trajectories and the lives of millions. To meet the needs of our planet and people, cities must be supported and governed to be sustainable, resilient, green, healthy, just, inclusive, and safe.

Having had the honour of serving as the Mayor of Penang, Malaysia, I have seen firsthand the urban transformations taking place in my home city and across Southeast Asia.

The ASEAN Sustainable Urbanisation Strategy, launched in 2018, is grounded on a deep understanding and forward-looking perspective that no country has yet achieved high-income status without high levels of urbanisation. Consequently, the prosperity of ASEAN is intimately linked to the prosperity of its cities.

Urbanisation has been a propeller of economic growth in Southeast Asian cities. Much of this growth occurs not only in mega-cities such as

Bangkok, Jakarta, and Manila but also in smaller and intermediary cities with populations between 500,000 and five million.

Across the region, cities are fulfilling their promise as engines of national and regional growth, continuing to attract households and individuals while offering countless economic, social, and cultural opportunities. This promise is captured in UN-Habitat's *World Cities Report 2020: The Value of Sustainable Urbanization*, which affirms that well-planned, managed, and financed cities create unquantifiable value that can vastly improve the quality of life.

However, urbanisation is making development challenges more complex, not only in terms of demand for better housing and basic services provision but also with regard to environmental, public health, and climate change issues. Poverty, informality, and inequality are still prevalent across the region. Indeed, urbanisation is exerting serious pressure on freshwater supplies, resource extraction, ecosystems, biodiversity, and health and sanitation systems.

The resource footprint of cities across the region is expanding. According to the ASEAN Sustainable Urbanisation Strategy, by 2025, waste volume in Southeast Asia is expected to increase by 150 per cent from 1995 levels. Many cities in Southeast Asia face the existential threat of rising sea levels and the increased frequency of natural disasters.

So, what are some of the important elements that make up a sustainable city?

To provide a fertile ground for sustainable growth, cities require holistic approaches integrating sectoral solutions. Urbanisation cannot be addressed in silos.

Irrespective of a city's profile and demographics, good urban governance is a critical enabler of sustainable urban development. Strengthening policies,

multi-level governance frameworks, and partnerships with relevant national and local agencies and stakeholders help deliver results.

Integrated and inclusive strategic planning that responds to and anticipates the needs of cities can mitigate future challenges and deliver better urban environments.

UN-Habitat has supported 56 countries globally in different stages of their national urban policy development, including Myanmar and the Philippines.

Strengthening capacity to deliver basic urban services such as water and sanitation, waste management, mobility, and energy, is critical to securing improved livelihoods, particularly for marginalised communities. In 2020 alone, 500,000 people were reached globally through UN-Habitat's Urban Basic Services Trust Fund, set up by UN-Habitat to support member states in addressing the increasing deficit in urban basic services in the face of rapid and unplanned urbanisation. In this regard, one of our initiatives is the Waste Wise Cities Campaign, which brings together over 200 cities committed to promoting the 5Rs: Rethink, Refuse, Reduce, Reuse, Recycle.

Ho Chi Minh City, Viet Nam

To understand what is happening in our cities and how we can act, we also must build smarter cities that are able to gather and manage data for sustainable urban development at the local level. In collaboration with ASEAN, UN-Habitat is providing technical support to cities in developing viable technical project proposals focused on digital solutions to enhance safety and security in urban areas, in alignment with the priorities indicated by the ASEAN Sustainable Urbanisation Strategy.

We must also strive for sustainable cities by exploring critical and emerging policy opportunities and new ways of thinking and working. *The Future of Asian and Pacific Cities* report, produced in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), identifies 15 policy pathways that can guide future urbanisation in the region to deliver on the 2030 Agenda for Sustainable Development and the New Urban Agenda.

These elements for achieving sustainable urbanisation demand greater attention as countries globally face the seminal wake-up call of the COVID-19 pandemic. Many cities

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> **We must also strive for sustainable cities by exploring critical and emerging policy opportunities and new ways of thinking and working.**

across Southeast Asia have been hit hard by recent waves of COVID-19 cases. Nevertheless, the pandemic must be an opportunity to build more sustainable cities, not just in overcoming the current and future pandemics but also in responding to other long-term global stresses.

The UN Secretary-General's policy brief, *COVID-19 in an Urbanizing World,* and the *UN-Habitat COVID-19 Response Plan,* aim to support local government and community-driven solutions in informal settlements; provide urban data, evidence-based mapping and knowledge for informed decisions; mitigate economic impacts, and initiate recovery.

The recent UN-Habitat report, *Cities and Pandemics: Towards a More Just, Green, and Healthy Future*, suggests that there is an opportunity from the pandemic for cities to seize the moment and enhance their inclusiveness and sustainability.

Urban slum in the Philippines

The report provides guidance to local, regional and national governments, and practitioners on designing coordinated policies from the local to national levels that are based on strong local data of more than 1,700 cities and well-documented evidence.

It is encouraging to see the great efforts of ASEAN to support cities in achieving sustainable urbanisation and harnessing this collective potential.

Sustainable and inclusive urbanisation is a key priority to achieve the objectives of the Master Plan on ASEAN Connectivity 2025 and to raise the living standards of communities all over Southeast Asia.

Since 2020, UN-Habitat has been collaborating with ASEAN to accelerate the implementation of the ASEAN Sustainable Urbanisation Strategy, providing technical support to pilot cities and bridging knowledge and lessons learned to regional-scale initiatives. This work is being conducted with the generous support of the ASEAN-

Australia Development Cooperation Program-Phase II (AADCP II) and collaboration with various partners.

Cities across Southeast Asia have an immense wealth of lessons and experiences to share with the world. One example is the growing effort of ASEAN cities to complete their Voluntary Local Review (VLR) of the SDGs. The VLR approach complements Voluntary National Reviews (VNR), represents a valuable instrument for cities to monitor their progress towards sustainable development, and offers fertile ground for fruitful exchanges with partners and cities at the national, regional, and global scale.

It gives me great pleasure to welcome cities from across Southeast Asia to the next World Urban Forum 11 (WUF11), to be held in Katowice, Poland, from 26 to 30 June 2022, with the theme of *Transforming Our Cities for a Better Urban Future*.

WUF11 presents a timely opportunity for us to come together and share the invaluable lessons learned from the ongoing pandemic, accelerate sustainable urbanisation, and suggest ways cities can be better prepared to address future shocks and challenges.

In this spirit of transformative change, we must continue to look for and implement innovative ways to plan, build, and govern our cities.

UN-Habitat stands ready to work in partnership across Southeast Asia towards sustainable urban development and a better quality of life for all. ■

Photo Credit: © UN Habitat

Viewpoint:

Hugh Lim

Executive Director, Centre for Liveable Cities

Hugh Lim, Executive Director of Centre for Liveable Cities, weighs in on what it takes to build pandemic-proof and resilient cities based on the practices that worked and deficiencies that emerged during the COVID-19 pandemic.

He discusses the benefits of transforming Southeast Asian cities into smart cities, particularly the role that smart solutions play in accelerating post-pandemic recovery and ensuring urban resilience to future crises.

COVID-19 spread rapidly in cities and caught the urban population off-guard. What changes—especially in infrastructure, human settlements, and urban systems and logistics—should cities make to keep urban dwellers safe from and more resilient against similar public health emergencies in the future?

Lim: Singapore entered the COVID-19 pandemic with the benefit of prior experience dealing with the severe acute respiratory syndrome (SARS) outbreak in 2003. However, the COVID-19 crisis brought with it even greater risks from the asymptomatic spread, which was different from our previous battle with SARS. This experience has shown us that any new disease outbreak could be very different from the last one.

Notwithstanding this, there are steps we can take to build up resilience in the face of future crises, including public health emergencies.

First, cities should invest in whole-of-society resilience.

When the pandemic first struck, cities needed to rapidly roll out infrastructure for treatment and quarantine whilst rolling out interventions to promote safe distancing and a clean and safe environment. Such just-in-time responses require cities to invest in building resilience, such as identifying and preparing just-in-case facilities and spaces and developing emergency preparedness mechanisms.

Photo Credit: © Centre for Liveable Cities

> **As an island-city-state, Singapore has limited land to produce much of its goods and food, and leverages its connectivity and global trade to facilitate supply flows. Keeping supply chains resilient is something we pay constant attention to.**

This pandemic has also highlighted the importance for cities to invest in sufficient social infrastructure such as healthcare services to support all communities. Otherwise, a crisis may result in uneven outcomes, as well as unwelcome competition for resources.

Achieving environmental health also requires a whole-of-community effort. Aside from investing in cleaning services and technology, cities need to think about how to sustain public hygiene habits and behaviours, and more generally, build the trust that is required for adherence to health and safety measures, such as the wearing of masks.

Important elements like trust and collaboration across society need to be built up over time.

Second, there is a need for us to rethink planning paradigms.

COVID-19 has shifted the way we live, work, play, and learn. It is too soon to conclude the eventual landing for trends such as working-from-home, but

it is clear that COVID-19 has accelerated digitalisation in our cities. Digitalisation presents opportunities for greater agility in how we plan and programme our cities—more spaces can serve multiple purposes, and digital platforms can be leveraged to enable places to be more flexible in use.

Similarly, hyper-local living patterns observed across cities during lockdowns highlighted the important role that neighbourhoods play in liveability. Cities will need to consider how to create better, healthier, more inclusive neighbourhoods, with a mix of uses that support work and leisure and access to nature, near the home. Planning and activating a city for the health of its residents is not a new theme, but it is certainly one that has come to the fore because of the COVID-19 pandemic.

The pandemic disrupted the food supply chain, affecting farm production, food processing and manufacturing, transport and logistics, and consumption. This impacted cities the most. How does Singapore handle these disruptions,

Above

Singapore

ensure food security, and provide essential goods and services for its population in the pandemic? What lessons can cities learn from Singapore's experience?

Lim: As an island-city-state, Singapore has limited land to produce much of its goods and food, and leverages its connectivity and global trade to facilitate supply flows. Keeping supply chains resilient is something we pay constant attention to.

Since SARS, Singapore has kept a certain level of stockpiles for essentials such as medical supplies. However, the speed and scale of border closures, disruptions to supply chains and imposition of export restrictions due to the COVID-19 pandemic were unprecedented.

There are five observations from our experience.

First, given the global disruption in supply chains, keeping a certain amount of stocks for essential goods

like food and medical supplies is a necessity. Cities may also need flexibility in land and space usage to cater for surge requirements. For instance, parts of the recently decommissioned Tanjong Pagar Terminal were retrofitted and repurposed into a dedicated cold storage facility for vegetables and protein.

Second, to prepare for future crises, cities may need to expand their scope in stockpiling and have an emergency procurement strategy. Expanding the scope of stockpiling will have implications on space and infrastructure needs —cities will need to consider how to enlarge the capacity of current storage spaces and the logistics needed for effective last-mile distribution of items. Cities also need to consider emergency procurement strategies to respond to disruptions quickly.

Third, land-scarce, high-density cities need to make innovative uses of land and space to ramp up local production to achieve some degree of self-sufficiency for essential items. For example, Singapore encouraged the development of Integrated Construction and Prefabrication Hubs— multi-storey manufacturing facilities for building components with a high degree of automation, for more efficient land and space utilisation, and to reduce wastage of raw materials.

Fourth, cities need to understand and address risks and interdependencies in essential supply chains. Key strategies to mitigate such risks include diversification from any single source, assessing interdependencies in supply chains, working closely with different nations to keep borders open, and leveraging on the resources of private and non-profit sectors.

Fifth, in the medium-term, cities must seek to move towards greater circularity. Supply chain disruptions highlighted the need to promote a more sustainable way of living. A circular system would mean that cities could make resources last longer. Reusing discarded items or refurbishing is an effective way of reducing dependency on imports. Singapore is investing to identify innovative ways to improve recycling and reuse rates such as repurposing its incinerator bottom ash to be used as road construction material (i.e. NEWSand).

Countries have developed strategies to recover from the COVID-19 crisis and emerge even stronger. What role do smart cities development play in post-pandemic recovery and reconstruction?
Lim: Technology and digital services have become crucial in providing new and safe ways to connect and access urban services, and will continue to do so.

Cities should accelerate their digitalisation plans to better serve citizens and residents across age groups and income brackets.

In a post-pandemic recovery, cities will need to consider how physical infrastructure should be planned to include digital infrastructure, to support remote working and schooling. Such digital infrastructure may also support remote healthcare and services for the elderly at home.

There is an increasing opportunity for greater digital innovation to meet the need for urban services. To respond to the challenges of COVID-19 in Singapore, for example, applications such as TraceTogether and SafeEntry were extremely important to support contact tracing efforts, whilst the Space Out and Safe Distance @ Parks platforms provided information on crowd levels so that people could make informed decisions on their outdoor visits during periods of heightened risk.

The private sector and civil society also responded by rolling out new platforms and apps such as e-payments for hawkers, delivery services and cloud kitchens, and community-based apps to match volunteers with seniors needing help. Some of these new solutions have potentially long-lasting implications for how we plan and operate our cities in the future. For instance, cloud kitchens are not new, but their growth has been accelerated by COVID-19, as more people make use of food delivery services in Singapore.

Importantly, while smart city technologies are key enablers for liveable, sustainable, and resilient cities of the future, they must be accessible to all. The effectiveness of digital solutions for the health and resilience of a city often depends on their acceptance and use by a large part of the population. In Singapore, "digital ambassadors" assist small businesses and the elderly to get comfortable with smartphones and applications, among other initiatives. ∎

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Da Lat, Viet Nam

Shaping Smarter ASEAN Cities

The Path Towards Environmentally Sustainable Cities

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The last few decades saw the dramatic expansion of megacities in Southeast Asia. The region has one of the fastest growing rates of urbanisation, with more than half of its residents living in urban areas.

ASEAN cities, like Manila, Bangkok, and Jakarta, are also some of the world's most densely populated cities with numbers still expected to grow due to rapid industrialisation and the influx of locals migrating from the countryside. By 2050, six out of 10 people in the region will be urban dwellers, according to the UN Environment Progamme. This significant demographic shift will redefine how the cities of the future will look like.

As cities expand, the demand for resources also increases, creating a heavier burden on the environment. Larger urban population translates to a higher demand for clean water, air, energy, and other vital resources.

Similarly, metropolitan areas leave larger ecological footprints. Recent estimates from the United Nations suggest that while cities occupy just 3 per cent of the Earth's land, they consume about 75 per cent of natural resources, produce 50 per cent of all wastes, and account for 75 per cent of carbon emissions. On top of these, many ASEAN cities are some of the most vulnerable to natural disasters and climate change. Rising sea levels and global warming put many of the region's metropolises at risk to more frequent floods, stronger tropical storms, and prolonged drought. A study cited in the ASEAN Sustainable Urbanisation Strategy revealed that almost 80 per cent of those worst

affected by these climate-induced disasters will come from the region.

The competition for limited resources, unmanaged waste production, and vulnerability to climate risks bring about serious socioeconomic and governance implications, including to key sectors such as health, employment, and other social services. Recent efforts towards greener cities recognise the increasing importance of maintaining the vital ecosystem services of urban environments. Smart and climate-resilient cities require an integrated and holistic approach to urban planning, especially in adopting mechanisms to control inputs needed and outputs produced in these human settlements.

Several initiatives have been implemented by ASEAN to tackle these emerging urban challenges. The **ASEAN Socio-Cultural Community Blueprint 2025** outlines strategic measures in mainstreaming green growth in urban areas, including (a) promoting sustainable urbanisation through participatory and integrated urban planning approaches; (b) enhancing local capacities to promote more liveable cities; (c) improving multi-stakeholder cooperation to ensure equitable access to vital resources; (d) supporting the development of greener infrastructures; and (e) putting in place enabling policies and institutional mechanisms to realise these goals.

Complementing this, the **Master Plan on ASEAN Connectivity 2025** was also adopted to serve as a blueprint for building up regional

Recipients of the ASEAN Environmentally Sustainable Cities Award

First ASEAN ESC Awards (2008)	
Brunei Darussalam	Temburong
Cambodia	Phnom Penh
Indonesia	Palembang
Lao PDR	Luang Prabang
Malaysia	North Kuching City Hall
Myanmar	Taungyi
Philippines	Puerto Princesa
Singapore	South West Community Development Council
Thailand	Bangkok
Viet Nam	Ha Long
Second ASEAN ESC Awards (2011)	
Brunei Darussalam	National Housing Scheme Rimba
Cambodia	Phnom Penh
Indonesia	Surabaya
Lao PDR	Xamneau
Malaysia	Perbadanan Putrajaya
Myanmar	Pyin Oo Lwin
Philippines	Puerto Princesa
Singapore	South West Community Development Council
Thailand	Phuket
Viet Nam	Danang
Third ASEAN ESC Awards (2014)	
Brunei Darussalam	Bandar Seri Begawan
Cambodia	Battambang Municipality
Indonesia	Balikpapan
Lao PDR	Luang Prabang
Malaysia	Melaka
Myanmar	Yangon
Philippines	San Carlos
Singapore	North West District
Thailand	Chiang Rai City
Viet Nam	Hue City
Fourth ASEAN ESC Awards (2017)	
Brunei Darussalam	Bandar Seri Begawan
Cambodia	Kep City
Indonesia	Tulung Agung
Lao PDR	Luang Prabang
Malaysia	Putrajaya
Myanmar	Nay Pyi Taw
Philippines	San Carlos
Singapore	North West District
Thailand	Nan Municipality
Viet Nam	Da Lat

connectivity by enhancing infrastructure, promoting innovations, and boosting people's mobility, among other initiatives. In 2018, the **ASEAN Sustainable Infrastructure Strategy** was adopted and the **ASEAN Smart Cities Network** was established to support ASEAN cities in building resilient and sustainable cities. Both initiatives highlight the value of enhancing environmental protection and strengthening urban resilience.

Over the years, significant progress has been made to further support sustainable urbanisation through the work coordinated and spearheaded by the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC). Specifically, AWGESC has coordinated and implemented various projects in the region addressing two priority programmes on **Sustainable Urban Planning, Development, and Implementation and Increasing Climate Resilient and Low Carbon Cities**.

Notably, the **ASEAN Environmentally Sustainable Cities (ESC) Award Programme** was launched in 2008 to recognise ASEAN cities that have adopted eco-friendly policies and programmes. The ESC Award is held every four years to encourage urban environmental sustainability in the region by recognising exemplary efforts and sharing best local practices in keeping ASEAN cities clean and green. Forty cities from all 10 ASEAN Member States have been awarded since this initiative was launched. In 2011, ASEAN also started issuing Certificates of Recognition to small cities (with population size of 20,000–750,000) and big cities (with population size of 750,000–1.5 million) for their laudable achievements in three specific criteria: Clean Air, Clean Land, and Clean Water. Additional consideration is given to those that adopt innovative solutions in promoting urban green spaces. To date, 21 ASEAN cities have been awarded under these categories. The latest set of ASEAN ESC Awards and Certificates of Recognition will be awarded by October 2021 back-to-back with the 16th ASEAN Ministerial Meeting on Environment in Indonesia. Both these awards underscore the importance of maintaining clean air, land, and water while ASEAN cities pursue sustainable development. These further support the AWGESC priorities of strengthening local capacities in urban planning and building climate resilient cities.

Since 2010, ASEAN has been organising the **High-level Seminars on Environmentally Sustainable Cities (HLS-SC)** for the mutual exchange of best practices and to foster collaboration among green cities in the region. Every year, this activity gathers policymakers, experts, and practitioners from East and Southeast Asian countries to share innovative urban development initiatives, deepen city-to-city collaboration, and develop specific recommendations for the East Asia Summit (EAS) Environment Ministers Meeting to improve the region's urban resilience. The September 2020 EAS HLS-SC, held virtually, was attended by more than 100 participants and yielded significant accomplishments.

Building on the outcomes of the ASEAN-Germany Development Partnership's Expert Forum in November 2018, the **ASEAN-Germany Project on Urban Climate Resilience** also started this year. Designed to build regional and local capacities on climate change adaptation, disaster management, and sustainable urban development, this initiative involves a series of workshops and forums, where outputs will be used to develop useful knowledge products.

This year, the implementation of the EU-supported **SMART Green ASEAN Cities** is set to commence, focusing on promoting the use of smart technologies and digital solutions

to address emerging urban environmental issues in the region. EU support also targets promoting sustained green investments and forming stronger partnerships among ASEAN and European cities. Similarly, the **ASEAN Municipal Solid Waste Management Enhancement (AMUSE)**, funded by the German Federal Government, is about to be rolled out soon. Scheduled to be implemented from 2021–2024, this project aims to improve waste disposal and recycling capabilities of key tourist cities in Cambodia, Lao PDR, Thailand, and Viet Nam.

Going forward, ASEAN is closely working with other development partners to finalise proposals for more green urban initiatives in the region. Among these are the **ASEAN-ROK Project on Clean Air for Sustainable ASEAN (CASA)**, which seeks to better understand the impact of air pollution and propose strategies to minimise its impact on the environment and public health, and the **China-ASEAN Environment Outlook 2**, which aims to document good practices of eco-friendly cities in ASEAN and China and strengthen regional cooperation to complement the crucial role of cities in achieving the Sustainable Development Goals. Other projects are also being developed with Member States to promote green infrastructure and protect urban biodiversity.

ASEAN Environmentally Sustainable Cities Award 2017

Moving towards more environmentally sustainable and climate-smart cities is increasingly becoming more essential as urban centres continue to support an ever-growing population. ASEAN cities, through the initiatives led by AWGESC, target to further realise these priorities by initiating activities that will maintain safe and equitable access to vital resources; build local urban planning capacities; and further enhance cities' climate resilience.

Tomorrow's cities should not only be technologically modernised, but should consistently embrace environment-friendly practices to promote urban green spaces and provide clean air, water, and land. Shaping smarter cities means building economically productive urban spaces, while ensuring equal access to these economic gains and preserving the integrity of its environment. ∎

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Viewpoint:

Non Arkaraprasertkul, PhD

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Digital Economy Promotion Agency (DEPA), Thailand

Dr. Non A serves in the Smart City Promotion Department of Thailand's Digital Economy Promotion Agency, where he advocates the concept and practice of smart cities. He specialises in the use of human-centred design to solve pressing open-ended problems. Having lived and worked overseas, he is constantly inspired by design, qualitative research, and behavioural economics. Originally trained as an architect, he holds a doctorate in anthropology from Harvard University.

Dr. Non A talks to *The ASEAN* about how digital connectivity transforms and builds sustainable cities, and what Southeast Asian countries can do to maximise its benefits, close the digital divide, and overcome other barriers.

What are the elements of successful digital connectivity? How do you think digital connectivity will transform society in general and ASEAN in particular?
Non A: Digital connectivity is about connecting people through digital means to encourage productive engagement. We have been living in the digital age, in which it is difficult to imagine a life without the convenience of connecting with people, goods, and

services through digital channels. That said, like all technological advancements, there are pros and cons. While digital technology brings people together, it can also divide them, such as through the dissemination of false information. So, the goal of digital connectivity is to enhance and expand the scope of its benefits while keeping the negative impact in check.

To be connected digitally, you first need the proper tools, skills, and infrastructure; the so-called "ecosystem." Second, a viable and competitive market is key to the introduction and adoption of superior technology. Naturally, both businesses and consumers are looking for new and efficient ways to exchange products and services. Decades ago, we might have seen some reluctance towards the digital medium because consumers had access to a limited amount of information. Moreover, there wasn't a strong pull of the so-called "network effect" to tip the balance towards digital adoption. Today, both access to information and the network effect are the name of the game. Consumers, therefore, adapt to means of digital connectivity that provide clear benefits such as convenience, lower cost and environmental friendliness. Third, an open innovation platform, such as open data initiatives, will unleash value-based products and services.

As the two latest generations of the world's population (Gen-Z and Gen-Alpha) are entering the workforce, they bring a natural inclination towards digitalisation. They will be living in an economic system whereby they act as both informed consumers and digitally savvy workers. It is likely that borderless transactions and e-citizenship will become the norm for these generations. So, whether ASEAN

society transforms into one that is efficient and inclusive, or divisive and vulnerable depends on the collective measures by the members of the ASEAN states to promote digital ecosystems, healthy competition, and public-private-partnership in the building of a culture of open innovation.

What stage of the digital connectivity trajectory do you think most ASEAN Member States are at today? Do you agree with the observation that the COVID-19 pandemic has accelerated countries' digital transformation?
Non A: In general, ASEAN Member States are in the expansion stage of digital connectivity. Despite news about "unicorn start-ups" being born, bred and heavily invested in, there is still quite a wide gap on the ground between those who have and do not have basic access to the digital economy. As the power of digital connectivity lies in big data analytics, more digital adoption means more diverse sets of data can be collected, analysed, and used to optimise services. Inclusivity, in this sense, is not just admirable but has the potential to optimise the game for the well-being of the citizens.

Both the market economy and the central governments have played a critical role in increasing digital literacy and, therefore, digital activity. With its large population, the ASEAN region has unrivalled potential to grow, especially if served well by the power of digital connectivity. While market forces should be credited for encouraging many to learn new skills, governments are mandatory enablers in creating a supportive environment through various means such as regulations and incentives.

There is some truth in the idea that an unexpected crisis may give rise to an essential transformation. Thus, there is no doubt that the COVID-19 pandemic has thrown us into the opportunity-in-crisis stage. Organisations and companies tend to fail because they underestimate

the importance of innovation to safeguard against so-called "disruption." Often when the legacy business is doing well, these organisations and companies take a backseat rather than proactively identify the domain of risk. The good news is that many organisations are using this moment to reevaluate their core business, current practices, and macroeconomic projections (e.g., global trends). One obvious example is education, which, though not yet perfect, has never been so flexible and accessible. Creators of educational content, too, have to come up with new succinct and interesting content. Using digital tools to cut down on waste and create new value for consumers, some of these organisations are not simply surviving but thriving.

It is remarkable that we have the landmark **ASEAN Digital Masterplan 2025** (ADM 2025), the purpose of which is to spearhead the transformation of the ASEAN region into "a leading digital community and economic bloc, powered by secure and transformative digital services, technologies and ecosystems." With the COVID-19 pandemic positioned both at the core and the periphery of this master plan, it is clear that the region as a whole has accepted the reality of the situation. We need to set secure, efficient, and inclusive standards for cross-border exchange and open innovation through digital connectivity.

What are the roadblocks to digital connectivity? Do you think that digital transformation requires a similar cultural shift or changes in societal values and norms? How so?
Non A: As mentioned earlier, the three components of digital connectivity are the ecosystem, viable market, and open innovation. These three components work synergistically to promote digital connectivity. A delay in establishing any of these components will certainly result in roadblocks piling up. Looking closely, what ties them together is cybersecurity. Hacking, spamming, and ransomware, just to name a few, are threats to positive digital exchange and transaction.

> **Cities are engines that will always require resources supplied to them by the rural and agricultural sectors.**

Since the core of a transaction is trust, no long-term (let alone successful) business relations can be formed without it. In addition to the technological aspects of cybersecurity, there is also the issue of individuals' understanding of privacy and data security. Many don't think twice when giving their consent to allow platforms and services to access their personal data in exchange for free services. This is not a good sign for the development of positive and sustainable digital connectivity. So, while cybersecurity standards must be created, we need to simultaneously raise public awareness of cybersecurity issues to prevent roadblocks to digital connectivity. In fact, it would be remarkable if we could move this awareness into the domain of a cultural shift.

Experts say that while digital connectivity will bring many benefits to society, it may also widen the digital divide and further inequality. How can countries and cities avoid this pitfall?
Non A: Quite often, what causes the digital divide is a lack of access to the infrastructure. For instance, the need to provide every child with the right to education can be fulfilled by remote classrooms only if there is a way to connect children in remote areas to the internet. Omnichannel merchants, too, need access to the telecommunication infrastructure before they can tell the world of their products. In order to avoid this pitfall, programs to promote the digital economy and society should be designed to engage with all social groups in society.

Tools, too, can be an issue, but this has been addressed mainly by the market. A decade back, there was a "One Laptop per Child" project whereby a team of designers from a top research institute created a prototype of a 100 US dollars hand-cranked self-powering computer. It was aimed at eradicating the discrepancy in access to education between children in remote and urban areas. Yet, the project did not succeed because the research team underestimated its capacity to build such an affordable laptop. Without the help of the market to scale up production and mitigate the cost of research and development, these sorts of high-tech products are hardly affordable. As we know, it is the market that has since enabled children to have access to powerful smartphones at a fraction of the cost of a laptop.

Digital connectivity of cities or urban areas appears to be the priority of governments. What are the implications of this to rural and agricultural development?
Non A: In the modern world, cities are the economic engine. This engine runs on support from the rural and agricultural sectors, which generously provide resources such as fresh produce. So, the implication is quite clear on that front: Cities are engines that will always require resources supplied to them by the rural and agricultural sectors.

As urban consumers demand more quality products, there is a clearer shift in the practices of the rural and agricultural sectors towards adopting digital technology to monitor, maintain, and maximise their productivity. In fact, technology has been effective in enhancing the efficiency of the entire food value chain, from production (e.g. the Internet-of-Things [IoT], drones, automation, digital twins, and smart farming) to handling and food storage before it reaches retailers (e.g. logistics and food storage technologies). Moreover, with open data, consumers can now better understand the products that they consume, such as by knowing where they come from, how they are grown, and who grew them, resulting in much more mindful and sustainable consumption.

While cities will continue to dominate the global economy, more people will choose to relocate to the countryside. The COVID-19 pandemic has also brought us another way of thinking about rural and agricultural development, as shown in the rise of remote work and urban-to-rural migration. Now people can have their cake and eat it too.

The digital trends that the COVID-19 pandemic has fueled portend a paperless, cashless, touchless, and officeless future. The pandemic shows us how much we have relied on the hope that the supply chain of goods and services will never be broken. But, as we see, the pandemic has painted a different picture, showing how dependent urban citizens are on the consumption economy. If the telecommunication infrastructure continues to improve, we will see more people escape from high-cost and high-pressure cities into peri-urban and rural areas, which could possibly give rise to a new breed of workers who also manage small plots of household agricultural lands.

Compared to the sprawling countryside, "compact" cities are greener. Citizens, however, are not always mindful when it comes to consumption. The idea of "smart cities" was born to tackle the problem of the cities' own destructive force emanating from ignorance. Without data, decisions are made based on precedents, heuristics and beliefs, which are only useful as long as those decisions deal with closed-ended problems. With data, we can monitor and optimise the consumption of all forms in the cities. There are many benefits to smart cities as platforms for transactions, logistics, and innovation. The bridge to digital connectivity is the well-being of both the urban and rural areas, for which the smart city is true north. ■

Confronting Urban Transport Woes in Southeast Asia

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The COVID-19 pandemic may have restricted mobility for most of us who live in ASEAN's bustling cities, but the reality is we still have to travel within our city's confines using private or public transport. We sleep and wake up to inescapable sounds of vehicles rumbling by. We go about our lives inhaling air pollutants spewed by a constant stream of vehicles plying our streets.

In short, transportation is as much part of urban life as people. Any talk of transforming cities into liveable and sustainable spaces must necessarily include transportation in the equation.

In Southeast Asia, a number of transportation and mobility challenges diminish the quality of life in large cities. Most of these challenges are interlinked and require innovative solutions and committed governance.

Road Congestion Due to Rapid Motorisation, Underdeveloped Infrastructure

Urban transport systems function to support the economy of cities and nations. Efficiently moving people and commodities from their point of origin to their destination translates to lower costs and higher productivity.

The dispersal of commercial, residential, and recreational spaces over a large expanse of land means more people are commuting at longer distances to reach jobs, markets, and services. However, in many cases, a city's mass public transport system, such as buses and light rails, has limited coverage area or passenger load, or provide unreliable service to meet public demand. This increases urban commuters' dependence on personal or privately owned motorised transport (further boosted by other factors such as rising household incomes in the region). The 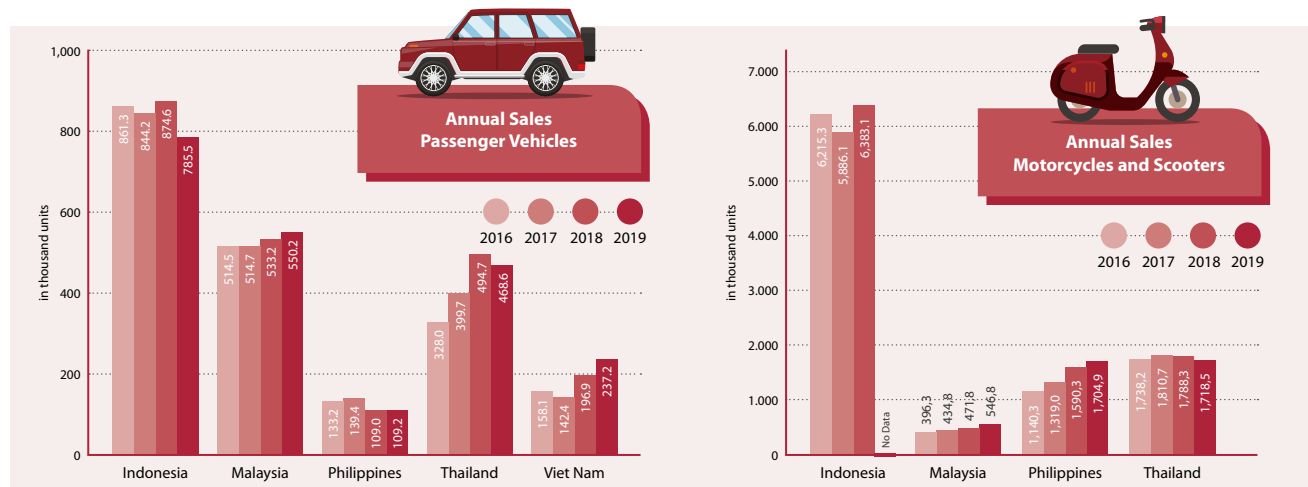increasing volume of sales of passenger vehicles and motorcycles in ASEAN Member States prior to the COVID-19 pandemic is one indicator of this growing dependency.

Those without personal vehicles rely on the "inner city paratransit systems" that provide "personalised, flexible, and affordable public transport service" (UNESCAP Committee on Transport, 2018). They include minivans, *angkot* (Indonesia), *songthaew* (Thailand), *tuktuk* (Thailand), *jeepney* (Philippines), and tricycle (Philippines), all of which only add to the volume of vehicular traffic.
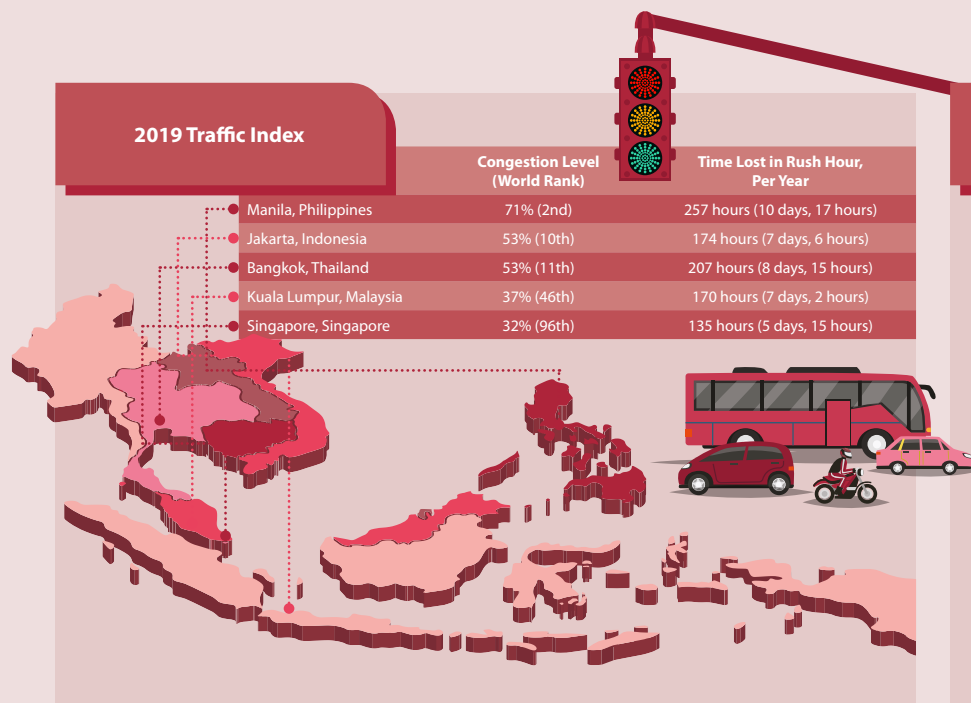
Meantime, the carrying capacity of existing road networks is often inadequate. Because of the massive investment required, expansion of road infrastructure is slow and constantly outpaced by the rate of increase in motor vehicles. Adding to the problem is the ineffective traffic management system in many cities.

These elements serve up the perfect storm for daily gridlocks, especially at peak hours, resulting in loss of time and money.

Before the pandemic ground cities to a halt in 2020, the TomTom Traffic Index, which tracks traffic conditions in over 400 cities around the world, recorded Manila's

Annual Sales Passenger Vehicles

2016 2017 2018 2019

in thousand units

Indonesia: 861.3, 844.2, 874.6, 785.5
Malaysia: 514.5, 514.7, 533.2, 550.2
Philippines: 133.2, 139.4, 109.0, 109.2
Thailand: 328.0, 399.7, 494.7, 468.6
Viet Nam: 158.1, 142.4, 196.9, 237.2

Annual Sales Motorcycles and Scooters

2016 2017 2018 2019

in thousand units

Indonesia: 6,215.3, 5,886.1, 6,383.1, No Data
Malaysia: 396.3, 434.8, 471.8, 546.8
Philippines: 1,140.3, 1,319.0, 1,590.3, 1,704.9
Thailand: 1,738.2, 1,810.7, 1,783.3, 1,718.5

Source: ASEAN Automotive Federation Statistics, 2016 to 2019 *<http://www.asean-autofed.com/statistics.html>*

2019 Traffic Index

	Congestion Level (World Rank)	Time Lost in Rush Hour, Per Year
Manila, Philippines	71% (2nd)	257 hours (10 days, 17 hours)
Jakarta, Indonesia	53% (10th)	174 hours (7 days, 6 hours)
Bangkok, Thailand	53% (11th)	207 hours (8 days, 15 hours)
Kuala Lumpur, Malaysia	37% (46th)	170 hours (7 days, 2 hours)
Singapore, Singapore	32% (96th)	135 hours (5 days, 15 hours)

Source: TomTom <*https://www.tomtom.com/en_gb/traffic-index/ranking/*>

Death by Road User Type

14%
2%
25%
16%
42%

Southeast Asia
(includes Indonesia, Myanmar, Thailand)

22%
6%
14%
22%
36%

Western Pacific
(includes Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Philippines, Singapore, Viet Nam)

- Riders of Motorised 2-3 Wheelers
- Occupants of 4-wheel Vehicles
- Cyclists
- Pedestrians
- Unspecified

congestion level in 2019 at 71 per cent. This means that a 30-minute trip during rush hour took 71 per cent extra time to complete. In total, drivers spent 10 days and 17 hours stuck in traffic in 2019, making Manila the second most congested city in the world and the top in Southeast Asia. Jakarta and Bangkok occupied the 10th and 11th spot, respectively, both with congestion levels of 53 per cent during the same year.

A 2018 study by the Japan International Cooperation Agency estimates that Metro Manila loses 3.5 billion pesos per day, or 70 million US dollars in today's exchange rate, due to heavy traffic. Indonesia's Ministry of National Development Planning, meanwhile, values the economic cost of congestion in Greater Jakarta at about 65 trillion Indonesian rupiah per year, or 4.48 billion US dollars in today's exchange rate, based on an OECD report.

Longer travel time also takes a toll on the well-being of commuters. It cuts into family, socialisation, and rest hours, and adds to mental and physical stress.

Traffic Accidents
Modern streets and buildings are designed primarily for motor vehicles, particularly cars, trucks, and buses. In recent years, Southeast Asian cities have accommodated the growing number of motorcycle riders and cyclists by designating special motorcycle, scooter, or bike lanes or window hours along major roads. In contrast, walkways are often nonexistent or if present, they are narrow, not interconnected, and occupied by vendors, parked cars, and other obstructions. This has forced pedestrians and a wide range of vehicles to "share" road space—a recipe for disaster. It exposes pedestrians, especially older people, people with disabilities, and children, to unnecessary risks.
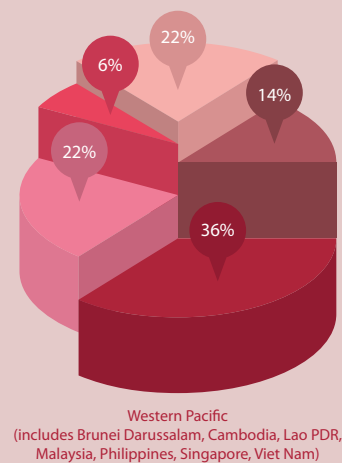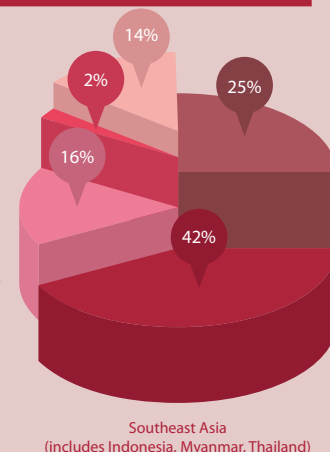
Road fatalities in the region are particularly high. The *Global Status Report on Road Safety 2018* of the World Health Organization shows that its Southeast Asia cluster logs 20.7 road traffic deaths per 100,000 population, higher than the global rate of 18.2 deaths per 100,000 population. WHO's Western Pacific cluster, meanwhile, has a road fatality rate of 16.9 deaths per 100,000 population. In both clusters, riders of motorised two- and three-wheelers comprise most of the casualties.

The weak enforcement of traffic regulations, such as wearing of seatbelts and motorcycle helmets, and poor road accident emergency response also keep urban streets in Southeast Asia from being safe zones.

Poor Air Quality from Vehicle Emissions
Motor vehicles are among the main sources of air pollution in cities. They emit fine particulate matter—defined as inhalable particles that measure 2.5 microns or less in diameter—and noxious chemicals such as lead, ozone, sulfur dioxide, nitrogen oxide, and carbon monoxide. With more vehicles on the road moving at snail pace during peak hours, more of these pollutants are released into the atmosphere, degrading ambient or outdoor air quality.

These transport-related pollutants present serious health hazards and could lead to premature death. Fine particulate matter, also referred to as PM2.5, is known to aggravate symptoms of asthma and

AMBIENT AIR POLLUTION EXPOSURE AND ATTRIBUTABLE DEATHS

Country	Annual Mean Concentration of Fine Particulate Matter in Urban Areas of Southeast Asia, 2016 (in µg/m3)	Total Deaths Attributable to Ambient Air Pollution, 2016
Brunei Darussalam	7.44	36
Cambodia	27.21	5,113
Indonesia	20.66	95,156
Lao PDR	21.78	2,635
Malaysia	17.15	9,495
Myanmar	33.73	25,483
Philippines	23.72	46,816
Singapore	17.24	2,211
Thailand	31.88	33,546
Viet Nam	23.75	34,232

Source: WHO <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/concentrations-of-fine-particulate-matter-(pm2-5)>; <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/ambient-air-pollution-attributable-deaths>

emphysema and increases one's risk of developing heart disease and lung cancer, according to WHO (2018). Ground-level ozone and nitrogen dioxide, meanwhile, could reduce lung function and cause a variety of respiratory illnesses.

Data from WHO show that Southeast Asian cities have among the highest levels of PM2.5, most exceeding WHO's annual mean concentration threshold of 10 micrograms per cubic meter of air (µg/m3). Some Southeast Asian countries also reported an alarming number of deaths from lower respiratory infections; trachea, bronchus, and lung cancers; ischemic heart disease; stroke; and chronic obstructive pulmonary disease, all traceable to ambient air pollution.

Improving the Mass Public Transportation System of Cities
One of the fail-safe strategies being pursued by Southeast Asian governments to address their transport and mobility problems is the improvement of their urban centers' public transportation system by expanding service routes, creating interconnection between various modes, and applying new technologies to boost speed and efficiency. Authorities and experts believe that this will incentivise urban commuters to use public transport instead of their personal

vehicles, which in turn is expected to simultaneously ease road congestion and reduce harmful emissions.

Over the past few years, a flurry of public transport projects has been initiated in Southeast Asian cities. Viet Nam is completing Hanoi Metro, the first city-wide rail transit system in Hanoi which will consist of eight lines with a combined length of 318 kilometres. The Philippines is extending two of its existing rail lines, LRT Line 1 South Extension and LRT Line 2 West Extension, and adding a new rail route, Metro Rail Transit Line 7, to cover more areas within Metro Manila and reach nearby suburbs.

Indonesia, in addition to completing the first line of Jakarta MRT in 2019, focused on interconnecting its bus rapid transit system (TransJakarta) terminals with those of its MRT, LRT, and regular buses, as well as implementing an integrated ticketing and payment scheme across all public transport modes. These initiatives, which increased service coverage and facilitated transfers, earned Jakarta the 2021 Sustainable Transport Award from an international panel of judges that included the Institute for Transportation and Development Policy (ITDP), Asian Development Bank, World Bank, International Council for Local Environmental Initiatives, and Clean Air Asia, to name a few.

The individual countries' focus on public transport is consistent with the strategic direction of ASEAN. The **ASEAN Transport Strategic Plan 2016-2025** cites "intensified regional cooperation in the development of sustainable transport-related policies and strategies" as one of its major goals, with "promoting the use of public transport in ASEAN cities" as a priority action. The **ASEAN Sustainable Urbanisation Strategy** includes an urbanisation framework that encourages countries to develop a bus rapid transit system which is deemed quicker and less expensive to implement and more environment-friendly than other transport modes.

Clean Transport Initiatives
Southeast Asian countries have stepped up efforts to reduce air pollution from motorised vehicles. National and city governments alike are encouraging their citizens to take up cycling as a greener and healthier mode of transport within the city. ITDP (2021) reports that in 2019, the city government of Jakarta established some 63 kilometres of safe bicycle trail, which it plans to expand to 500 kilometres this year. Additionally, a programme that lends bikes to commuters free of charge has been launched and is available in 72 stations located near transit hubs.

This is consistent with the goals identified in the **ASEAN Fuel Economy Roadmap for the Transport Sector 2018-2025: With Focus on Light-Duty Vehicles**, which include, among others, a 26 per cent reduction in the average fuel consumed per 100 kilometres of new light-duty vehicles; alignment of fuel economy label information across the region; and adoption of national fuel consumption standards for light-duty vehicles in all markets.

Safer Roads for All

Southeast Asian countries enacted new traffic policies to make roads safer for motorists, passengers, and pedestrians. Cambodia amended its traffic law in 2020 imposing stiffer fines and penalties for traffic violations, such as drunk-driving, non-wearing of helmets, and overloading of passengers. Starting January 2020, Malaysia began enforcing its child restraint policy covering all private vehicles. The Philippines is poised to implement a similar child car seat regulation which it passed two years earlier.

To further bring down traffic-related injuries and fatalities, the ASEAN Member States are pursuing other road safety initiatives, guided by the strategies outlined in the **ASEAN Regional Road Safety Strategy**. These include strengthening road safety management; designing road and roadside safety initiatives that fit local contexts and available resources; promoting the use of safer vehicles; ensuring compliance of road users with traffic regulations; and instituting speedy and competent post-crash response.

New Developments

The COVID-19 pandemic is changing the discourse surrounding road transport and mobility. Telecommuting or telework—which has become a stopgap measure during the pandemic lockdowns—may now become a permanent alternative work arrangement for some occupations even after the pandemic is over. To what extent this will reduce (if at all) road traffic remains to be seen. Telework is also opening the possibility of workers opting to live outside urban centres and creating a reverse migration trend.

At the other end of the spectrum, paranoia over close physical contact, especially with the emergence of more contagious COVID-19 variants, may push people to shun the use of public transport. The 2021 Deloitte Global Automotive Consumer Study, in fact, indicates this trend, with 52 per cent of Southeast Asian consumers now preferring to use personal vehicles compared to only 37 per cent before the pandemic. With the continued threat of COVID-19 and fear of similar outbreaks hovering for years to come, governments will need to study and institute long-term health and safety standards for mass transit systems, including smart solutions (e.g. electronic ticketing, contact-tracing apps, crowd-management solutions), to (re)gain the trust of commuters and make the operation of public transit systems viable. ■

Initiatives to transition to more environment-friendly vehicles are also underway. The Philippines is implementing a Public Utility Vehicle Modernization Program, which aims to phase out 180,000 jeepney units and replace them with either electric vehicles or Euro-4-compliant (low carbon emission) vehicles. Viet Nam is manufacturing its first electric buses for deployment to five major cities, namely, Hanoi, Haiphong, Danang, Ho Chi Minh, and Cantho. Thailand recently launched a national plan that will see the local production and circulation of one million electric vehicles— including 400,000 cars and pick-up trucks, 620,000 motorcycles and 31,000 buses and trucks—by 2025.

Viet Nam, Thailand, and Singapore have also made it compulsory for car manufacturers and importers to put CO2 emission and fuel economy labels (i.e. litres of fuel and/or kilowatt hours consumed per 100 kilometres) on new passenger light-duty vehicles, such as sedans, vans, and pick-up trucks, to make it easier for buyers to shift to cleaner and more efficient vehicles.

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10 Things to Know
About Southeast Asian Cities

1 **Bandar Seri Begawan**, the capital city of Brunei Darussalam, started as a settlement built along the inlets of Brunei River dating back to around the 7th century. The name "Bandar" is derived from the Persian word for "harbour" while "Seri Begawan" means "blessed one" in Sanskrit.

2 **Jakarta** is the most populous city in Southeast Asia with more than 10 million people living in the Indonesian capital. Greater Jakarta, composed of the capital and its satellite cities, Bogor, Depok, Tangerang, and Bekasi, has more than 30 million inhabitants in total.

3 **Manila** is the most densely populated city in Southeast Asia and among the most densely populated cities in the world. According to the Philippines' 2020 census, Manila has a population density of 73,920 persons per square kilometer.

4 Located around 320 km north of Yangon, Myanmar's new capital **Nay Pyi Taw** is the largest city in Southeast Asia with a land area of 7,054 square kilometres. It replaced Yangon as the seat of government in 2006, making Nay Pyi Taw the youngest capital city in Southeast Asia.

5 Thailand's bustling capital, **Bangkok**, beats Paris as the most visited city in the world in 2019. Bangkok welcomed 22.78 million international visitors during the period.
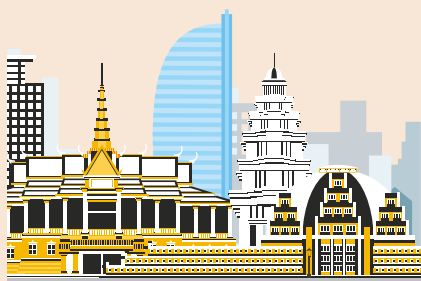
6 Southeast Asia's tallest building, *Landmark 81*, is located in **Ho Chi Minh City**. Completed in 2018, the building stands at 461.2 metres, surpassing the previous title-holder, Petronas Towers in Kuala Lumpur, by around 10 metres.

Sources: Encyclopædia Britannica *https://www.britannica.com/*; Ministry of Hotels and Tourism. (n.d.). Nay Pyi Taw. Retrieved from *https://tourism.gov.mm/nay-pyi-taw/*; Mastercard. (2019). Global Destination Cities Index 2019. Retrieved from *https://newsroom.mastercard.com/wp-content/uploads/2019/09/GDCI-Global-Report-FINAL-1.pdf*; Philippine Statistics Authority. (23 July 2021). Highlights of the Population Density of the Philippines 2020 Census of Population and Housing. Retrieved from *https://psa.gov.ph/content/highlights-population-density-philippines-2020-census-population-and-housing-2020-cph*.

Southeast Asian Cities in the UNESCO World Heritage List

7 **Phnom Penh**, named after a Buddhist temple, Wat Phnom, was founded in 1372. It first became Cambodia's capital in 1434 and regained this status centuries later, in 1865.

8 **Singapore** is one of only three city-states in the world; the two others are the Vatican City and Monaco.

9 The first Southeast Asian Peninsular Games, which later became the Southeast Asian Games (SEA Games), was first held in **Bangkok** in 1959. Bangkok also hosted the most number of Asian Games, having done so four times, in 1966, 1970, 1978, and 1988.

10 The first rail-based transport systems in the region were **Jakarta's horse-drawn trams** (1869), **Saigon's steam trams** (1881), **Manila's horse-drawn** *tranvia* (1883), and **Singapore's steam trams** (1886).

Angkor, Cambodia

"Angkor is one of the most important archaeological sites in Southeast Asia. Stretching over some 400 square kilometres, including forested area, Angkor Archaeological Park contains the magnificent remains of the different capitals of the Khmer Empire, from the 9th to the 15th century. They include the famous Temple of Angkor Wat and, at Angkor Thom, the Bayon Temple with its countless sculptural decorations."

Source: Angkor by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/668*, under license CC-BY-SA IGO 3.0

Historic City of Ayutthaya, Thailand

"Founded in 1350, Ayutthaya became the second Siamese capital after Sukhothai. It was destroyed by the Burmese in the 18th century. Its remains, characterized by the *prang* (reliquary towers) and gigantic monasteries, give an idea of its past splendour."

Source: Historic City of Ayutthaya by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/576*, under license CC-BY-SA IGO 3.0

Town of Luang Prabang, Lao PDR

"Luang Prabang is an outstanding example of the fusion of traditional architecture and Lao urban structures with those built by the European colonial authorities in the 19th and 20th centuries. Its unique, remarkably well-preserved townscape illustrates a key stage in the blending of these two distinct cultural traditions."

Source: The Town of Luang Prabang by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/479*, under license CC-BY-SA IGO 3.0

Historic City of Vigan, Philippines

"Established in the 16th century, Vigan is the best-preserved example of a planned Spanish colonial town in Asia. Its architecture reflects the coming together of cultural elements from elsewhere in the Philippines, from China and from Europe, resulting in a culture and townscape that have no parallel anywhere in East and South-East Asia."

Source: Historic City of Vigan by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/502*, under license CC-BY-SA IGO 3.0

Pyu Ancient Cities, Myanmar

"Pyu Ancient Cities include the remains of three brick, walled and moated cities of Halin, Beikthano and Sri Ksetra located in vast irrigated landscapes in the dry zone of the Irrawaddy River basin. They reflect the Pyu Kingdoms that flourished for over 1,000 years between 200 BC and AD 900…Remains include excavated palace citadels, burial grounds and manufacture sites, as well as monumental brick Buddhist stupas, partly standing walls and water management features—some still in use—that underpinned the organized intensive agriculture."

Source: Pyu Ancient Cities by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/1444,* under license CC-BY-SA IGO 3.0

Melaka and George Town, Historic Cities of the Straits of Malacca, Malaysia

"Melaka and George Town, historic cities of the Straits of Malacca, developed over 500 years of trading and cultural exchanges between East and West in the Straits of Malacca…With its government buildings, churches, squares and fortifications, Melaka demonstrates the early stages of this history originating in the 15th-century Malay sultanate and the Portuguese and Dutch periods beginning in the early 16th century. Featuring residential and commercial buildings, George Town represents the British era from the end of the 18th century."

Source: Melaka and George Town, Historic Cities of the Straits of Malacca by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/1223*, under license CC-BY-SA IGO 3.0

Bagan, Myanmar

"Lying on a bend of the Irrawaddy River in the central plain of Myanmar, Bagan is a sacred landscape, featuring an exceptional range of Buddhist art and architecture. The seven components of the serial property include numerous temples, stupas, monasteries and places of pilgrimage, as well as archaeological remains, frescoes and sculptures. The property bears spectacular testimony to the peak of Bagan civilization (11th -13th centuries CE), when the site was the capital of a regional empire."

Source: Bagan by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/1588*, under license CC-BY-SA IGO 3.0

Historic Town of Sukhothai and Associated Historic Towns, Thailand

"Sukhothai was the capital of the first Kingdom of Siam in the 13th and 14th centuries. It has a number of fine monuments, illustrating the beginnings of Thai architecture. The great civilization which evolved in the Kingdom of Sukhothai absorbed numerous influences and ancient local traditions; the rapid assimilation of all these elements forged what is known as the 'Sukhothai style.'"

Source: Historic Town of Sukhothai and Associated Historic Towns by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/574*, under license CC-BY-SA IGO 3.0

Hoi An Ancient Town, Viet Nam

"Hoi An Ancient Town is an exceptionally well-preserved example of a South-East Asian trading port dating from the 15th to the 19th century. Its buildings and its street plan reflect the influences, both indigenous and foreign, that have combined to produce this unique heritage site."

Source: Hoi An Ancient Town by UNESCO World Heritage Centre, *https://whc.unesco.org/en/list/948*, under license CC-BY-SA IGO 3.0

Shifting Currents

ASEAN's Health Ministers review national and regional COVID-19 pandemic responses

The region fights a dual threat: Dengue and COVID-19

ASEAN Health Ministers Vow Stronger Regional Cooperation on COVID-19 Response and Future Preparedness

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ASEAN Health Ministers convened virtually via a Special Video Conference of ASEAN Health Ministers Meeting (AHMM) on 22 July 2021 to discuss the progress of national and regional efforts to accelerate COVID-19 response in the region.

The meeting, chaired by the Indonesian Minister of Health, is a follow-up Special Video Conference of AHMM since the World Health Organization (WHO) declared COVID-19 a pandemic in March 2020. The first one was held on 7 April 2020, resulting in the adoption of the Joint Statement Special Video Conference of the ASEAN Health Ministers in Enhancing Cooperation on COVID-19 Response. In between these high level ministerial meetings, several regional initiatives on COVID-19 prevention, detection and response have been implemented under the direct purview of the ASEAN Health Sector.

At the second meeting, the Ministers recognised that ASEAN Member States, together and individually, have made significant progress in responding to and managing COVID-19 across the region, especially in implementing measures to control its spread and delivering vaccines to their most vulnerable population groups. They also recognised the continuous surge of COVID-19 cases following the initial vaccination rollout and the threats emerging from the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2) variants.

According to the WHO, there are currently eight SARS-COV-2 variants that have emerged and posed threats to global public health: four variants—Alpha, Beta, Gamma, and Delta—are categorised as variants of concern (VOC); and four other variants—Eta, Iota, Kappa, and Lambda—are categorised as variants of interest (VOI).

The Ministers agreed that enhancing laboratory capacity across the region and reinforcing genomic sequencing testing and surveillance of SARS-COV-2 are crucial to quickly detect and share information on SARS-COV-2 variants so that countries can determine appropriate additional measures to control the spread of these more infectious variants.

The Ministers also shared progress on their respective national COVID-19 vaccine rollout plans and programmes. Through a Joint Statement, the ASEAN Health Ministers agreed to provide guidance on and support each other's vaccine rollout, and work on the swift operationalisation of ongoing and upcoming regional mechanisms in COVID-19 response, such as COVID-19 ASEAN Response Fund and ASEAN Regional Reserve for Medical Supplies.

To advance the region's preparedness and response to future public health emergencies, the Ministers will guide ongoing ASEAN health initiatives, such as the operationalisation of the **ASEAN Centre for Public Health Emergencies and Emerging Diseases (ACPHEED)** and the development of **ASEAN Public Health Emergency Coordination System (APHECS)**. They will also support the operationalisation and implementation of the ASEAN Comprehensive Recovery Framework, particularly its provision to enhance health systems, which is anchored on cross-sectoral coordination and cross-pillar collaboration.

The Ministers discussed the importance of strengthening cooperation to overcome uncertainties about the pandemic situation contributed by fake news and misinformation, which greatly affect the effectiveness of existing COVID-19 responses. They welcomed the support from ASEAN's partners and various stakeholders in the implementation of COVID-19 response initiatives, including those addressing the pandemic's impact on mental health.

"We affirm our commitment to control the current pandemic and to prepare for future public health emergencies, among others, through timely and equitable access to affordable, safe and effective vaccines, and treatment, as well as the ongoing development of ASEAN Health Protocol, while also promoting sustainable development in the region towards achieving a healthy ASEAN community," the Ministers declare in the **Joint Statement Special Video Conference of the ASEAN Health Ministers on ASEAN COVID-19 Response After One Year**.

The meeting also saw the launch of the **ASEAN Portal for Public Health Emergencies**. The platform was developed by the ASEAN Health Sector with the support of the Government of Canada and the Government of Germany. It provides a dedicated and easy access to information on health emergency issues, and will be especially useful to government officials, experts, and the public. The portal enables users to not only access information, historical data, and latest news, but also interact with other users in real-time. ∎

The Joint Statement of the 2021 Special Video Conference of the ASEAN Health Ministers *https://asean.org/storage/Adopted_Joint-Statement-2021-SVC-AHMM-on-COVID-19.pdf*

The ASEAN Portal for Public Health Emergencies *https://aseanphe.org/*

Old Threat, New Threat:
Fighting Dengue in a Pandemic

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June 15 is ASEAN Dengue Day. This year, one of the activities held to mark the day was the ASEAN Regional Forum on Dengue organised by the Philippines Department of Health as Chair of ASEAN Health Cluster 2 on Responding to All Hazards and Emerging Threats. With the 2021 theme, "ASEAN Unite Against Dengue Amidst the Pandemic," the forum aimed to raise awareness and share knowledge on best practices and strategies to address dengue while the COVID-19 pandemic rages on.

ASEAN's Dengue Burden

Dengue has become a major health concern globally. According to the World Health Organization, the number of cases worldwide increased ten-fold from around 500,000 in 2000 to 5.2 million in 2019, while deaths from dengue rose from 960 in 2000 to 4032 in 2015 (WHO 2019).

In ASEAN, almost 70 million cases of dengue fever occur annually, making this arboviral infection one of the most common and economically important neglected tropical diseases (NTDs) in the region (Hotez et al., 2015). Moreover, dengue has been estimated to result in almost

one billion US dollars in annual economic losses for the region (Shepard et al., 2013).

In 2011, noting that ASEAN countries have the highest rates of dengue infection in the Asia Pacific region with significant socio-economic impact, ASEAN countries issued the **Jakarta Call for Action on the**

Control and Prevention of Dengue. This statement sought to align national prevention and control programmes with regional strategies. It also called for the adoption of an ASEAN Dengue Day as a way to build awareness and strengthen regional cooperation in the fight against dengue.

Dual Threat: Dengue and COVID-19

The forum discussed the challenges faced by the ASEAN Member States in preventing and controlling dengue amid a deadly pandemic.

With more people remaining home due to lockdowns, the risk of contracting dengue increases without preventive measures. Anti-larval operations to destroy mosquito breeding spots may not be a priority as field workers get re-assigned to sanitation duties. Clean-up projects in residential communities and schools are also suspended. In addition, lockdowns prevent public health officials from visiting residential areas and other sites to carry out larvae control. All of these factors likely contribute to the increase in dengue cases.

Dengue infections range from being asymptomatic to severe. There is no specific treatment for dengue but early access to medical care can lower the fatality rate to below one per cent. At the forum, however, participants highlighted the reluctance of patients with dengue fever to go to the hospital for fear of being labelled as COVID-19 patients. There have been reports of some doctors giving dengue fever cases a provisional diagnosis of COVID-19. Travel restrictions also make it difficult for patients to seek treatment.

The pandemic has also affected supply chains, causing delays in the delivery of antigen rapid diagnostic tests for detecting dengue. The delivery of *malathion* and *abate* used to control mosquito breeding has been impeded as well.

Dengue took a backseat in terms of medical research priorities. This setback has led to the dual problem of a gap in funding and the lack of qualified individuals to fill vacant positions, resulting in the shortage of academic experts to guide students in medical entomology.

Raising awareness on dengue, alongside COVID-19, is one of the ways forward. To achieve this, it requires mobilising community support for COVID-19 and dengue prevention measures and providing clear information and educational materials on both diseases in all media channels. Households, too, need to be encouraged to eliminate mosquito-breeding sources.

Among best practices put forward was using the bacteria Wolbachia (wMel)-infected Aedes aegypti. This method is being used in Indonesia, Malaysia, Singapore, and Viet Nam, and has been noted to bring cases down.

The forum highlighted the need for countries to build up their capacity to address dengue. For instance, implementing a programme with year-round activities may be more effective than launching a limited outbreak response. Since the monsoon season fuels the spread of dengue in the region, it may be necessary for authorities to begin prevention measures before the onset of the rainy season and to consider other local conditions for devising appropriate responses.

The forum also noted a need for ASEAN to standardise and harmonise surveillance and reporting indicators across the region. Establishing a platform to share country experiences regularly and research updates would be helpful, mainly in informing national dengue-related policies. ◼

In a Nutshell

Dengue is a viral infection mainly caused by the *Aedes aegypti mosquito* and, to a lesser extent, the *Ae. albopictus mosquit*o. The *Aedes* mosquito bites during the day, usually two hours after sunrise and before sunset. It causes flu-like symptoms, such as high fever, headaches, vomiting, joint pain, and rash. Symptoms typically last for two to seven days and can range from mild to severe. In severe cases, dengue may cause severe bleeding, organ damage, and plasma leakage. There are four types of dengue viruses; thus, it is possible for a person to be infected four times. However, early detection of the disease and access to proper medical care reduce the fatality rate of severe dengue to below one per cent.

Dengue is prevalent in urban and semi-urban areas. Dengue mosquitoes breed in stagnant water, including clogged drains, bases of flower pots, and watering cans. Construction sites have also been found to be principal breeding grounds for dengue mosquitoes. A lack of proper urban planning combined with increased urban population density, poor water storage, and unsatisfactory sanitary conditions have contributed to the region's increase in dengue cases.

Dengue is among the 17 diseases on the World Health Organization's list of neglected tropical diseases. Neglected tropical diseases are a group of infections that are most common among marginalised communities in developing countries. They are caused by a variety of pathogens such as viruses, bacteria, protozoa, and parasitic worms. These diseases generally receive less funding for research and treatment than malaises like tuberculosis, HIV-AIDS, and malaria.

ASEAN Health Cluster 2 issued a Statement as part of the annual observation of the ASEAN Dengue Day. Read the ASEAN Dengue Statement here:

https://asean.org/storage/ASEAN-Health-Cluster-2-Statement_2021-ASEAN-Dengue-Day.pdf.

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The Shape of Things to Come

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Dr. Clement Camposano currently serves as the 11th Chancellor of University of the Philippines (UP) Visayas. He spearheads efforts to make remote learning work for university professors and students. He also mobilises university resources to help Iloilo City and Iloilo Province in their pandemic response.

Much has been made of the "educational promises of the digital" (Schulte, 2019), the discourse obviously driven by the pervasive rise of the internet and the technologies that have developed around it.

Others, however, have called for caution, taking a more critical stance towards "[a] dominant orthodoxy within the education community that Internet connectivity is somehow leading to new and improved forms of education" (Selwyn, 2010). The COVID-19 pandemic has clearly undermined the point of this debate. The internet and digital media have become indispensable for ensuring the continuity of teaching and learning, even as the massive shift to online classes has also forced schools to deal with the unintended consequences of technology use.

Digital Technologies and Platforms are More than Communication Tools

The lesson of the past year is clear. Social media platforms, learning management systems, and synchronous communication technologies should not be viewed as mere tools for delivering predetermined content. A lot of attention must be paid to the kind of challenges these technologies present to users given the "new sets of communicative contexts and relationships" they help create, according to Mills and Morton (2013).

Those who have studied the cultural consequences of the internet and its associated technologies have, for some time now, warned against reducing these "to some kind of communicative instrumentalism or indeed to any other kind of instrumentalism" (Miller, 2010; see also Farnham and Churchill, 2011; Boyd, 2014; Kozinets, 2015; and Caliandro, 2017). Others like Selwyn (2010) have warned about "the exclusionary potentials of networked learning" and its tendency to perpetuate and amplify existing social inequalities.

Miller (2010a) has pointed to the multifaceted nature of Facebook. Simply put, it is not one kind of technology for engaging others in a particular way as "people seem to do all sorts of things with it." A widely referenced study on networked teens also described how social networking site fields could be unexpectedly repurposed, and "[that] the context of a particular site is not determined by the technical features of that site but, rather, by the interplay between [users] and the site" (Boyd, 2014).

Mutual Shaping of Technologies and Users

The mutual shaping of technology and user has been asserted by Kozinets (2015) who argued that, "[with] our ideas and actions, we choose technologies, we adapt them, and we shape them, just as technologies alter our practices, behaviours, lifestyles and ways of being." This coheres with the broad insight of Miller (2010b) that the things we make—obviously, that includes technology—do also make us.

Educational institutions need to understand that they cannot have full control of the technologies that will be used, nor of the consequences of such use (Kozinets, 2015). Indeed, it is true that while we use technology, we are, in an important sense, also being used by technology and what is emerging from this dialectic we are only beginning to understand and may not be able to fully anticipate. Nonetheless, while we are without quick and easy answers, certain guideposts can be discerned that will help institutions navigate the way forward.

Opportunities and Challenges of Online Learning

The mandated shift to online classes has accelerated the deployment of digital technologies, presenting schools with a range of opportunities to transform the way they operate.

Technology-driven dreams of online, flexible, or blended programs transcending the physical space of campuses will be matched by more determined push towards quality assurance to make programs and services comparable across jurisdictions. Universities, banking on digital connectivity, will likely focus on broader education markets with an eye towards internationalisation.

The challenges are certainly complex. As digital technologies restructure communication by privileging certain features of human interaction and obscuring others (Markham, 2005), we can expect significant resistance to online classes. The reliance on visual cues and immediate feedback in traditional classrooms will have to be unlearned, particularly as online classes feature asynchronous settings. Teachers (and students) deeply invested in notions of teaching (and learning) defined by face-to-face engagement will not be inclined to support the redesign of courses and programs around mediated interaction.

For schools, investments in accessible technology should be complemented by programs aimed at systematically shifting the way teachers think about teaching. Teachers need to have greater faith in their students, that the latter are not mere lumps of potential awaiting teachers' directive intervention but can assume greater responsibility for their learning. Students, for their part, need to become independent learners—indeed, lifelong, adaptable learners able to thrive in an information-rich, uncertain future.

The notion of teaching as a directive process serves as a rigid frame keeping teachers from reimagining teaching despite the possibilities highlighted by the shift to online classes. Here, the question is not how they might learn to teach differently with the available technology, but how they might carry on teaching the way

they have always taught without face-to-face engagement. Teaching needs to be reimagined as a process where teachers are no longer purveyors of wisdom but facilitators of learning (see Biesta et.al., 2015).

The following reflection (translated from Filipino), posted by a Manila-based high school teacher on his Facebook page, illustrates how pedagogical challenges are being framed by some teachers in the transition to online classes:

"How do we teach literature in the time of the pandemic? There will be no dialogue. But according to Stephen Bonnycastle, dialogue is important in the exploration of literature. Students are made to speak, and each idea is questioned and questions from everyone are answered. Aside from this, how can literature be taught that does not drive students to extreme boredom? If the teacher introduces literary terms to students and merely feeds them the 'correct' reading of a work, how can literature be kept alive? How do we convey the flavour of words, of doubts, and of opinions? How can children be encouraged to read? There are many questions. Nothing is certain."

To address these concerns, it is important for educational institutions to go beyond the "'new managerial' concerns of efficiency, modernization and rationalization" (Selwyn, 2010) in their deployment of digital technologies in order to focus on the dynamics of technology use. This will allow institutions to be attentive to, and perhaps explore the possibilities of, "the surplus communicative economy" of digital technology observed by Miller (2010a), as well as the different ways this technology is forcibly reshaping human interaction within educative processes.

Inequality and Exclusion
As educational institutions look to avail of the current and future potentials of internet-based education, there is an urgent need to (re)introduce issues of inequality and exclusion into the conversation. After all, education, even in the West, has not been the great equalizer, according to Reay (2004), and the increasing reliance on digital technology will most likely deepen the problem of inequality. It is one thing to think of change in an abstract way and quite another to be caught up in it and grapple with its unintended consequences.

How to make digitally mediated or internet-based education less unequal should be part of the strategic direction for both schools and governments. Even where connectivity is assured by good infrastructure, we should not ignore "the exclusionary potentials of networked learning," according to Selwyn (2010). Inequalities will remain and these can range "from basic abilities to self-include oneself into networks, to subsequent abilities to benefit from these connections once they are established."

A recent World Economic Forum survey (2020) found strong evidence of "accelerated and permanent digital transformation" among the youth across ASEAN, with some 64 per cent of full-time students surveyed reporting more active use of online education tools. Moreover, 70 per cent of these full-time students believe that their increased use of online education will last beyond the pandemic—in stark contrast to the findings of a 2019 survey where 52 per cent of youth respondents never used online education.

The same 2020 survey, however, found that 69 per cent of respondents experienced difficulty in working or studying remotely, with seven per cent finding it impossible to do either. Of these respondents, Filipino (78 per cent) and Thai (76 per cent) students reported experiencing the most difficulty. According to the survey, the results suggest that "those with below college education and those living outside capital cities, were far more likely to face difficulties…" As might be expected, aside from lack of digital skills, other constraints include poor internet quality, high internet costs, household distractions, and lack of motivation.

Importance of Local Context
The promise of online learning should not also obscure the importance of "local" contexts in the framing of learning processes and practices. Early assumptions about a "separated out 'virtual domain'" have proved untenable (Miller, 2013; see also Boyd, 2014). It is erroneous to see technology-based education as context-free, abstracted from "local contexts such as the school, university, home and/or workplace and, it follows, the social interests, relationships and restrictions that are associated with them" (Selwyn, 2010).

Now is the time to understand the complexities and complications of internet-based education as entire educational systems are forced to navigate the transition to online classes. Aside from gaps in digital skills and digital infrastructure, and how these articulate with enduring structural inequalities in particular social contexts, educational and political leaders in the region are well advised to pay attention to complex pedagogical issues brought about by technology use.

Investments in technology, connectivity, and curriculum redesign are crucial. But just as hardware needs appropriate software to actually work, well-funded programmes that help teachers and students reimagine teaching and learning are also necessary. ■

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Conversations

On inspiring urban renewal projects, creating green spaces, and reducing food waste

Photo Credit: © mustbeyou/Shutterstock

Kotchakorn Voraakhom
Landscape Architect

Kotchakorn Voraakhom is on a mission to save her hometown, Bangkok, from the worst of environmental degradation. Armed with a master's degree in landscape architecture from Harvard University in the United States, Kotch established a landscape architecture firm, Landprocess, to pursue her aesthetic goal of blending modern design with natural systems. She also founded Porous City Network, a social enterprise that focuses on addressing urban environmental problems in cities across Southeast Asia by engaging local communities.

Her iconic projects include the Chulalongkorn University Centenary Park, a public green space that tilts downward to collect the rainwater that flows through the grass and wetlands; Asia's largest organic rooftop farm at Thammasat University in Bangkok; Chao Praya Sky Park, the first bridge park across the river in any capital; and Siam Green Sky Urban Agriculture Learning which was inspired by Thai agricultural wisdom.

Kotch is a TED Fellow, an Echoing Green Climate Fellow, Asia Foundation Development Fellow, and the Chairwoman of the Climate Change Working Group of the International Federation of Landscape Architects in Asia-Pacific.

"Bangkok is originally a water-based city. But as I grew up, I started to see fewer canals and less green. This city used to be called the 'Venice of the East' because we used to have over 4,000 canals. But where are they now? They've all been paved into roads and buildings. Back then, I'd go out in my backyard and play in the rice fields. Today, I only see concrete. It made me question our city's development and its impacts on both people and nature. My culture has instilled compassion in me and taught me to care for others—and that's part of the reason why I became a landscape architect.

"I completed my master's degree at Harvard University and worked in the United States for seven years. That experience was crucial to elevating my learning of the landscape architecture profession to a global standard. Living and working abroad also helped me reflect on my hometown more clearly and see it with a fresh perspective. It helped me step back from the persistent issues in Thailand and see solutions that can be adapted in my country and culture. During those years, I found what kind of landscape architect I wanted to become, the kind of work I wanted to create, the environmental problems I wanted to solve, and the purpose I wanted to fulfill.

Thammasat Urban Rooftop

"I returned to Bangkok in 2011, just before the worst flood in Thailand's history hit. The disaster made me wonder what I could do as a landscape architect to prevent this kind of man-made catastrophe from happening again. In 2012, I established Landprocess to pursue that mission. In addition to answering my clients' needs, I made it our duty and principle to use our work to address climate change impacts. I hoped that our concepts could serve as solutions for our society's most pressing social and environmental issues. But convincing our clients and changing their mindsets wasn't easy. So we try to offer them something different from their usual business expectations and ask them to open up. Our key is to initially answer the project's basic needs and then later convince them that our impactful designs are within

budget. I'm lucky to have been working with clients who understand the value of our concepts and allow us to implement our skills to turn their projects into community and climate solutions.

"After completing several projects, I realised that we also needed other mechanisms outside our design work to tackle climate change, environmental degradation, and social inequity. I learned that it wasn't just about constructing the project but also about creating and fostering the youth and the communities we engage with. I created Porous City Network in 2017 to raise awareness and involve locals in our co-design processes. These local people know best about where they live and the issues they face. The Porous City Network has organised various international workshops and field trips. For example, bringing Thai students to USM (Universiti Sains Malaysia) in Penang, Malaysia, to work

with communities to understand their local context of flooding and work together to develop solutions. We've also collaborated with another university in Jakarta. However, the COVID-19 situation has put it on pause.

"From working with universities and the younger generation of designers, I believe our education systems need to change their focus. Many education systems trained us to serve private sectors, specialising in projects like resorts, golf courses, and other luxurious, avant-garde structures and spaces. But, many others need our skills too. The living quality of many vulnerable groups can be improved with better design. We've learned the basic vocabulary and skills to improve these aspects in schools, but when it comes to real action, many of us still lack the understanding of ways to approach
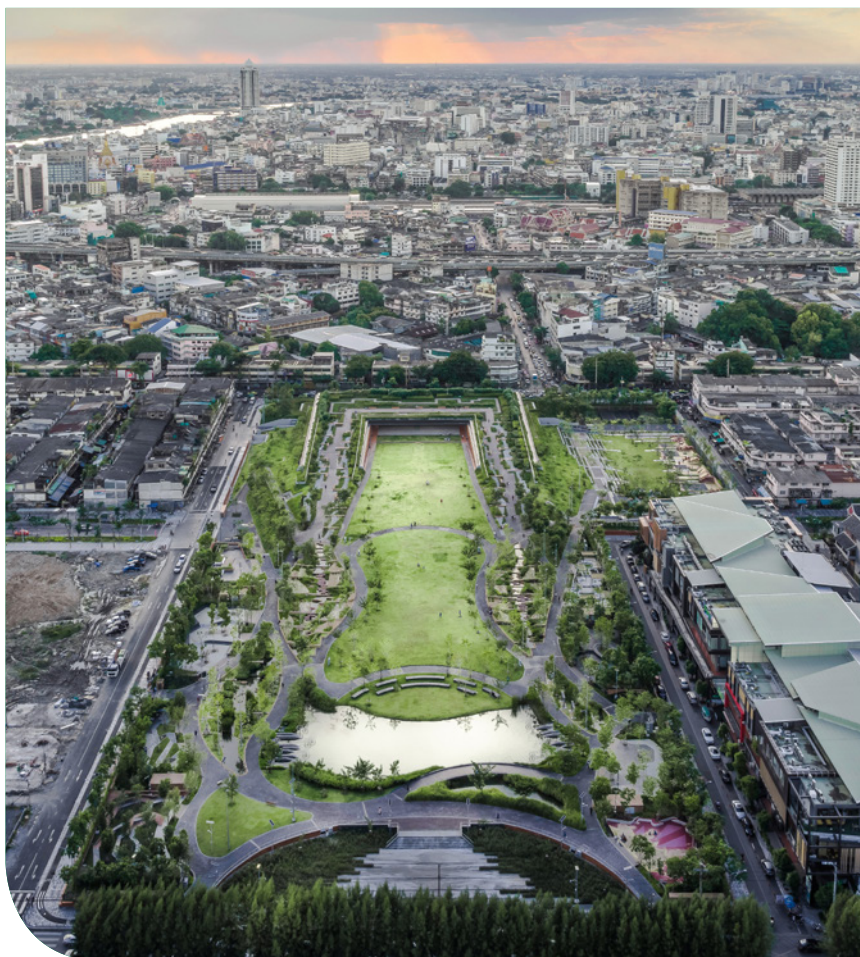
Top
Chulalongkorn University Centenary Park

Bottom
Chao Praya Sky Park

and engage such communities, primarily how our design drives our development policy. That's what's missing in our classrooms today. We must make sure that the next generations can see the bigger picture of our cities and our ecosystems to develop the skills and the determination to create better architecture for all.

"To create a sustainable city, we have to think of it as a living creature. We need to consider not just humans but all the animals, trees, and rivers that form them. To be healthy, you need to make sure all your surroundings are healthy too. The pandemic taught us a lot about our need for good, inclusive public spaces and how unsustainable many of our current lifestyles and cities are. There are a lot of rooms to create good public spaces; we can create public spaces not just on vacant lands but also wasted spaces like rooftops and abandoned infrastructures. Recently, I worked with my team to transform a 40-year abandoned railway infrastructure into a bridge park right in the heart of Bangkok. We try to integrate grey, green, and blue elements into a single system because the only way for us to continue living with nature is to learn from and coexist with her. I hope we learn from this pandemic and use it as an opportunity to change and do better.

"I think we can all agree that the Southeast Asia region has many natural and cultural resources that the world is envious of, and I hope we can see that and make efforts to preserve and flourish them. But, most importantly, it is vital to involve women, locals, and vulnerable communities in making decisions about their own homes. For this, we need more collaboration, not just working on tables in meeting rooms but also the actions in the field." ∎

Interviewed by Novia D. Rulistia. The conversation has been edited and condensed for clarity. The views and opinions expressed in the text belong solely to the interviewee and do not reflect the official policy or position of ASEAN.

Muhammad Agung Saputra
Founder and CEO, Surplus (Food Rescue App)

Agung founded Surplus, an app that enables food retailers to sell their overstock or imperfect products to help limit food waste in Indonesia. Indonesia is the second-largest producer of food waste per capita in the world, producing around 23-48 million tons of food waste per year.

This amount of food can feed 61 to 125 million people. Food loss and waste also contribute to around 7.29 per cent of Indonesia's average greenhouse gas emissions and correspond to 213 to 551 trillion Indonesian rupiah in annual economic losses.

"Surplus initially started as a community to raise awareness about food waste. However, we soon realised that to amplify our reach and provide solutions to this issue, we also need a sustainable business model. That is why we created the app to connect those who want to rescue food that is still good but about to be thrown away with businesses. University students are currently one of our largest customer bases.

"When I was pursuing my master's degree in London, I had to survive on a limited budget. I actively looked for closing hour discounts or flash sales from restaurants to afford my meals. I found it interesting that plenty of food was thrown away while people barely have enough to eat. Studying environmental technology, I saw that I could create a platform to fill this gap in Indonesia.

"There are a lot of challenges as I embark on this journey with Surplus. Food waste is not seen as an attractive issue in Indonesia compared with other issues such as plastic waste. Since no regulations govern food waste in Indonesia, businesses have no incentives to put any effort into curbing waste. We receive massive rejections from business owners who prefer to throw their unsold products away rather than sell them for half price. They are afraid that selling leftover or imperfect food will ruin their brand.

"Although it has been very difficult, we have managed to gather merchants who have the same vision in combating food waste. We created a campaign to help them turn their losses into profits while at the same time enabling their brand to become more green and sustainable to win and prevail over their competitors in getting new customers.

"During the COVID-19 pandemic and mobility restrictions in Indonesia, we help business owners to survive by selling their overstock or imperfect product. Together,

With Surplus, Agung helps businesses to turn waste into profits and minimise their food waste

we have prevented around 2,100 US dollars in losses for business owners who joined the movement during the pandemic. Besides, we have also been doing social campaigns and redistributing surplus food from business owners or donors to those in need during the pandemic with our Surplus community.

"Our vision is to create an environment without food waste and to support Sustainable Development Goals 2 (Zero Hunger), 12 (Responsible Consumption

"We have saved more than 3,000 meals, which is equal to more than 450 kg of food and 16 tons of CO2 emission. That corresponds to emissions from burning 16 million pounds of coal."
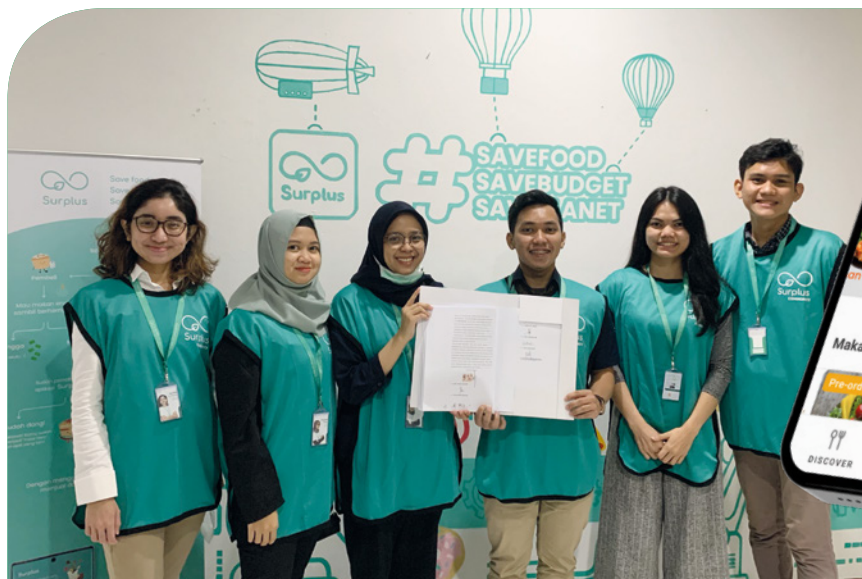
Surplus tries to raise awareness on food waste issue through its Surplus app and activism

and Production), and 13 (Climate Action). We have saved more than 3,000 meals, which is equal to more than 450 kilograms of food and 16 tons of CO2 emission. That corresponds to emissions from burning 16 million pounds of coal. In the near future, I hope for increased awareness of the food waste issue so we can expand Surplus to other cities in Indonesia.

"ASEAN could help raise awareness about the food waste issue and help push for the creation of laws or policies at the national level. Having a network or community of those working on this issue around the region will also help us to learn and share best practices, as well as to unleash the power of community in championing this issue." ■

Interviewed by Pricilia Putri Nirmala Sari.
The conversation has been edited and condensed for clarity. The views and opinions expressed in the text belong solely to the interviewee and do not reflect the official policy or position of ASEAN.

Han Jing Toh
Sustainability Educator

Seeing massive amounts of fresh produce thrown away in Singapore's wet markets motivated Han Jing to help reduce food waste. She started composting seven years ago, when she was still a student at Nanyang Technological University.

Through her composting workshops, Han Jing teaches others to become more mindful of their food waste

Family and friends soon followed suit, composting and reducing their own food waste. Han Jing also grows her own food and promotes native edible plants and sustainable soil farming. She teaches others how to "grow consciously, cook consciously, and trash consciously" through her web platform and social media handle, Little Green Chef.

"Seven years ago, food waste and composting were not a thing in Singapore, or at least they did not post it on the internet. All the information I could find online were based on colder climates, and of people who had gardens in their backyard. Nevertheless, I tried and failed. Needless to say, my first attempt was a complete failure and I stank up the whole corridor. I kept on trying and finally managed to adjust everything to our local context. Today, I can proudly say that my family produces zero food waste.

"When I began composting, it was just a solo attempt to make a small difference to this world. I didn't know that I would actually influence people to get on board. Over time, my family has become more aware of their food waste and even helped me with composting. Initially, I thought it was just my family, but soon after, friends and even strangers started coming to me as well. They were asking for advice on how they can do composting at home or how they can live more sustainably. I never imagined that there would be such a snowball effect. What started as an individual effort, ultimately became something that I could share with others through talks and workshops.

"Since the goal of composting is to reduce waste, I usually advise people to reuse existing materials. They can make a compost bin from the things that they have at home. It is about letting them use their creativity to find all the different resources. Even for my workshop kits, I make a point to use second-hand resources.

"My clients usually come to me because they want to make a positive change. They want to become more mindful and sustainable with their way of living. I usually follow through with them because composting is not just a one-off thing. It takes a few months. I work with them step by step throughout the entire journey until they succeed and are able to make compost. Once you know how to do it, you will be able to do it for the rest of your life. It's all about empowering people and transforming one household at a time.

"I believe that no one is too young or too old to make a positive difference to this earth. I did a workshop for a school once where I set up a compost bin in the school garden for the students. What happened was, every lunch break, the children would bring their food scraps to the garden and put them in the compost bin instead of tossing them away. It was really heartwarming to see the children living out the lessons they have learnt. Once you have formed the habit in children, when they grow up, it will become a part of them and they will pass it on to their family too later on. For me this is the most inspiring part because I get to help and shape the character of our future generation.

"My grandmother holds a special place in my heart and is my source of inspiration for a large part of my work. She took care of me when I was young and the first place where I encountered butterflies and caterpillars was right in her garden. Last year after the lockdown, I regenerated the soil and transformed her garden into a mini food forest. Ever since then, she has become much more active and engaged as she has plenty to do in her garden. The whole gardening process really helped her to become physically more active and mentally healthy too.

"I hope that there are more people composting in Singapore. I think that is happening as the scene is transforming really quickly. When there is no soil, there is no life. Soil impacts us in more ways than we can imagine. I also really hope that people can appreciate soil farming more. It takes very little to destroy good soil but very long to build good soil. As much as there are things that we can do to promote soil farming at the grassroot level, changes in the policy level do create changes on a much larger scale. I really hope that ASEAN can help to facilitate this." ■

Interviewed by Pricilia Putri Nirmala Sari. The conversation has been edited and condensed for clarity. The views and opinions expressed in the text belong solely to the interviewee and do not reflect the official policy or position of ASEAN.

Bjorn Low
Urban Farmer and Executive Director, Edible Garden City

Bjorn took a leap of faith after 10 years of working in the digital marketing industry to explore a more sustainable lifestyle. His decision led him to a soul-searching journey across the United Kingdom, Spain, and Japan, where he learned to grow food in organic agricultural farms.

When Bjorn returned home, he found underutilised spaces and incorporated urban farms into Singapore's cityscape. In 2012, he co-founded Edible Garden City with the goal of improving sustainability in local food production. It began with one restaurant garden for chefs that was driven by the global farm-to-table movement. Edible City has now built more than 260 urban gardens across Singapore. The gardens also serve as an inclusive community hub, providing green spaces for people to learn and connect with nature.

"We did a lot of pop-ups during the early days. One of the pop ups is called Nong, which is the Chinese word for farming. It was in a 30 thousand square feet rooftop car park

Bjorn says urban farming is a personal journey that helps him become a better person and leader

Edible Garden City provides a safe space for people to reconnect with nature and develop a sense of community

in Chinatown's People's Park complex. We want to make the rooftop carpark an alternative solution for growing food in the city.

"One pop-up led to another and we grew to become a community of food enthusiasts and food activists working to create a narrative of what we see as a sustainable food system. We are using urban farming as a modality to encourage citizen participation, community engagement, and also achieving social impact within the areas that we operate.

"It was challenging to find access to the local agriculture market or industry because land is premium in Singapore

and barriers to entry are high. You can't just buy land to start a market garden and start a small-holding enterprise. After four or five years, the government gave us a space to further develop our work on urban agriculture and develop the model to become a viable community farm.

"On our main farm, we are able to create a model that addresses social impact issues around the community that we operate in. One of those is through employment policies where we integrate beneficiaries, such as adults with special needs and the elderly, by bringing them into the workforce. We are elevating the societal pressures that they face by providing them with a safe space, a community, and an identity.

"We use urban farming to support elderly men living in low-income housing estates in Singapore. There are difficulties directing social services support to them because they

are not as forthcoming with their problems and tend to fall into social depression and isolation. When we started our program, there was an elderly man who never talked. He was a bit detached and struggling with social isolation. Working in the garden gives him a sense of belonging and purpose so that by the end of the six-week programme, he became cheerful and couldn't stop talking.

"The act of nurturing a plant can also be a healing process. Throughout the journey there will be a lot of challenges and if you look at them through a positive lens, these resemble lessons about life and nature. Studies on horticulture therapy are also very encouraging. It allows us to see how we can pivot our urban farming operations into more than just providing food, but also providing care to the community. We want to elevate mental wellness and cohesiveness of the community as the core of our work for the future.

"Singapore has lost a lot of knowledge on local food as we eat with a global mindset. We want to work on the mindset shift and get people to demand more local leafy vegetables instead of the imported cold weather crops. Southeast Asia is thriving because we can grow everything, so why are we growing things that are not suited to our climate? Local edible plants like *sayur manis*, moringa, and *ulam raja* should have more prominence than kales and strawberries.

"What I look forward to is for ASEAN to facilitate knowledge sharing on native and local food culture across the region. Our region shares almost the same climate and a lot of this knowledge is still encapsulated within individual ASEAN countries, such as Indonesia, Malaysia, and Thailand. Indigenous people have always lived in harmony with the environment and their knowledge should be used to build a stronger sense of responsibility within people living in urban areas. I hope that this knowledge can be adapted to shape our landscape to become more sustainable for the future." ▪

Interviewed by Pricilia Putri Nirmala Sari. The conversation has been edited and condensed for clarity. The views and opinions expressed in the text belong solely to the interviewee and do not reflect the official policy or position of ASEAN.

Snapshots

BUILDING GREATER UNDERSTANDING AND TOLERANCE IN A TROUBLED WORLD

JONATHAN TAN
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ASANTI ASTARI
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We live in a troubled world of cultural pessimism where greater understanding and tolerance are becoming somewhat elusive. Worldwide, conflicts are getting longer and more complex, with some lasting 20 years on average.

These conflicts and crises may arise invariably due to a clash of cultures, civilisations, religious beliefs, ideologies, or values. Despite efforts to mediate peace between nations and groups, some conflicts persist. They often fester as a result of trust deficit.

Conflicts also arise from traditional security threats. More often than not, they are caused by asymmetric threats from resource scarcity, the radicalisation of views, intolerance, a lack of respect for life and diversity, disinformation, and extremism.

Likewise, climate change has become a threat multiplier. Last year, we saw the devastating effects of climate change in the raging bushfires that razed large swaths of land in Australia and the successive typhoons that swept across countries in Southeast Asia. Climate-induced catastrophic events trigger greater competition for water, food, and energy security, which may lead to greater conflicts if not managed well.

The onset of the COVID-19 pandemic also surfaced a previously invisible virus—bigotry. We see increasing incidences of xenophobia, discrimination and racism, all of which reveal intolerance and distrust.

Digital prevalence has made it easy to spread misinformation, fake news, hate speech, and bigoted and misogynistic views online, and for this negativity to turn into calls for real-life violence. These white noises of untruths undermine our COVID-19 recovery efforts. Moreover, the toxic climate of cultural pessimism, distrust, and hate poses barriers to effective preparedness and resiliency efforts and responsiveness of governments, organisations and individuals in maintaining social harmony.

ASEAN is rising to the challenge.

During the 32nd ASEAN Summit in Singapore in April 2018, His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah, Sultan and Yang Di-Pertuan of Brunei Darussalam broached the importance of fostering greater understanding, tolerance and a sense of regional agendas among the peoples of ASEAN. He highlighted that initiatives in several sectors in the ASEAN Socio-Cultural Community (ASCC) such as education, sports, culture, and environment if harnessed further, could demonstrate the benefits of living harmoniously to foster greater regional understanding and tolerance.

Since conflicts are multi-faceted and are underpinned not just by political-security aspects, but also by cultural or socio-economic causes, ASEAN must adopt a holistic approach towards promoting greater understanding and tolerance by effectively synergising efforts across ASEAN sectors and Community Pillars.

To this end, we need to shift from considering underlying issues as sector-centric to also being vectors that may

Photo Credit: © Momentum Fotograh/Shutterstock

work across a range of policy areas to foster greater understanding, tolerance, and regional solidarity.

Having identified these vectors across the sectors, we will also need to facilitate better and support inter-sectoral collaborations so that we can achieve a more significant impact with our efforts.

Further, we need to think about the existing areas where we can add value to ongoing efforts and the new areas where we can create initiatives to promote greater understanding. For example, the lack of tolerance is often due to the lack of safe spaces to address differences and effective communication to understand them. This entails more than just disseminating timely and accurate information. It is also crucial to create purposeful spaces where difficult conversations can take place and develop narratives to counter misinformed views.

Also, it is important for us to develop greater social capital. A growing body of evidence demonstrates that communities and societies with a high level of social capital show greater resiliency and recover most quickly from disasters and conflicts. In this regard, the importance of generating social capital is key, at upstream and downstream levels.

Considering the above, it will be helpful to identify the nexus to move forward more optimally to foster greater understanding and tolerance and promote resiliency and regional solidarity. An example of such a nexus includes promoting cultural and creative peacebuilding through the inter-sectoral lenses of youth, education, health, information, and media.

Likewise, while we continue to direct greater attention to our common interests and shared goals and vision, it is equally vital that we proactively identify how differences can be resolved.

Social harmony, peace, and stability are not a given. So the work is cut out for ASEAN to continue to deepen our capacity and expand our toolboxes and know-how to foster greater understanding, tolerance and regional solidarity, while amplifying awareness and nurturing a culture of peace, confidence, and trust. ■

FOSTERING GREATER UNDERSTANDING
TOLERANCE AND A SENSE OF REGIONAL AGENDAS AMONG THE PEOPLES OF ASEAN

ASANTI ASTARI
OFFICER, CULTURE AND INFORMATION DIVISION, ASEAN SOCIO-CULTURAL COMMUNITY DEPARTMENT

How do we develop and inculcate a sustainable culture of peace, tolerance and greater understanding in the region? How do we incentivise peace-building and development to promote greater understanding, mutual respect, tolerance, and regional solidarity?

These were the two guide questions that framed the panel discussion entitled **ASEAN High-Level Cultural Forum (HLCF) on Promoting an Adaptive ASEAN Community of Greater Understanding, Tolerance and a Sense of Regional Agendas Among the Peoples of ASEAN**. The discussion was held via a video conference on 27 May 2021.

Four experts from Brunei Darussalam, Cambodia, Philippines, and Japan exchanged views on the topic, drawing on their expertise and experiences. They highlighted

that enhancing creative exchanges, education, digital adoption, and respect for human rights are some of the important aspects necessary to foster a greater and lasting culture of peace, tolerance, and greater understanding in the ASEAN region.

The participants, coming from a wide range of institutions including governments, international organisations, think tanks, non-profits, academe, and private sector, added their perspectives on the core levers and areas that can be tapped to facilitate active conversations on

Photo Credit: © https://heritage.asean.org/; National Library of Thailand

The ASEAN Cultural Heritage Digital Archive, which houses the digital representation of the region's most significant cultural heritage objects, is one of the ways ASEAN can promote intercultural understanding

promoting regional understanding and tolerance. Some of the participants shared that community building and inclusive grassroots involvement are crucial to instilling a sense of greater understanding and tolerance in the hearts of people. They further suggested prioritising the development of media strategies first and foremost since effective media communication will ensure the dissemination of all the good suggestions conveyed during the forum.

The HLCF generated key recommendations to sustainably nurture a culture of peace, tolerance, and greater understanding. These include the need to promote a safe space for youth engagement; develop cultural capital; promote greater biodiversity in the region to mitigate climate change; promote creative peace buiding and greater people-to-people contact, education and community building efforts; and improve digital adoption especially during the COVID-19 pandemic. There is also a suggestion to be more strategic in our messaging to the ASEAN community through a more targeted media strategy.

The HLCF was organised by the ASEAN Secretariat in collaboration with the Senior Officials' Committee for ASCC Council (SOCA) Brunei Darussalam as one of the projects under the ASEAN-Japan Cooperation titled "Fostering Greater Understanding, Tolerance and a Sense of Regional Agendas among the Peoples of ASEAN." The project is supported by the Government of Japan through the Japan-ASEAN Integration Fund 2.0 (JAIF).

The initiative was first broached during the 32nd ASEAN Summit in 2018, where His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah, the Sultan and Yang Di-Pertuan of Brunei Darussalam, raised the importance of fostering greater understanding, tolerance, and a sense of regional agendas among the peoples of ASEAN in light of global and regional uncertainties. His Majesty highlighted that education and sports, greater information accessibility, and initiatives to showcase the benefits of living harmoniously are some examples to foster greater regional understanding and tolerance, bearing in mind the interwoven relationships of political, economic and socio-cultural dimensions.

To date, there are at least 13 policy initiatives in the form of guidelines, declarations and statements, as well as 65 project initiatives

that can be considered as ASCC's efforts to foster greater understanding, tolerance, and a sense of regional agendas among the peoples of ASEAN. These policy and project initiatives were developed by multidisciplinary sectors and have been running mainly in silos, but could benefit from greater cross sectoral collaboration and coordination to deliver greater impact. It is to address this gap that the *regional policy framework* is being developed to serve as an overarching document that can lend coherence to the various policy and project initiatives and guide ASEAN's efforts to promote greater understanding and tolerance and imbue a sense of regional agendas among the peoples of ASEAN.

Following the HLCF, the regional policy framework will be further refined. A regional workshop will also be held in late July 2021 with the aim of seeking feedback from the ASCC Sectoral Bodies and selected civil society organisations to finalise the regional policy framework before being put forward for SOCA's deliberations and ASCC Council's endorsement. The regional policy framework is being prepared for adoption by the ASEAN Leaders during the 38th ASEAN Summit at the end of the year, as part of the deliverables under the ASEAN Chairmanship of Brunei Darussalam. ■

Bridges

ASEAN and India: history, literature, and music that bridge our cultures

THE LAND OF GOLD, SPICES AND COCONUTS: INDIA'S VOYAGE TO SOUTHEAST ASIA

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The monsoon winds that blew trading ships from India to Southeast Asia over the centuries also ushered in a deep cultural relationship that has continued until today. The maritime route began at either the Coromandel coast or the coast of the Bay of Bengal and continued to Cape Comorin and Straits of Malacca to reach the Malay Peninsula. There was also a land route via Bengal, Assam, Manipur, and Burma (now Myanmar) that reached different parts of Southeast Asia.

Coedes' *Indianized States of Southeast Asia* provides a rich detail of Southeast Asia's links with India, which date back to over 1000 years. The earliest contacts noted were of Buddhist monks sent by Emperor Asoka to Myanmar in the 3rd century BC. More evidence of connections between India and Southeast Asia were found in later years. Among the earliest Hinduized states was the Kingdom of Funan, which flourished between the 1st to 6th centuries. It covered portions of present-day Cambodia, Thailand, and Viet Nam.

Sanskrit writing dating back to the 4th century can be found on stone pillars in Eastern Borneo. The 5th century collections of Pyu inscription in Lower Myanmar is also in Sanskrit. The royal edicts in 6th century Sumatra were written in the local Malay language using Indian script.

Indian influence is also evident in various World Heritage sites in the region, such as the Angkor Wat in Cambodia, the Borobudur in Indonesia, and the Ananda temple in Myanmar. These monuments were constructed in the 7th and 8th centuries. It is believed that the various medieval courts in the region hosted Indian artisans from Kalinga, modern-day Orissa who helped build these legendary monuments. Many of the motifs on the walls of Borobudur and Angkor Wat are noted to resemble carvings of *Konarak* and other medieval temples of eastern India.

By 1000 AD, there was a well-established trade relationship between Tamil merchants in the eastern peninsular of the Indian sub-continent with ports in Southeast Asia. In the *Ramayana* and other texts, referred to as *Swarnabhumi,* land of gold, Southeast Asia was seen as a land of riches and abundance. Other names given to areas in this region were *Takkola*, a market of cardamoms, *Narikeladvipa*, an island of coconut palms, and *Karpūradvipa*, the island of camphor. The search for gold and spices motivated traders to venture abroad. Technological advances, which enabled the development of seaworthy junks that could transport 600 to 700 men, further fuelled these voyages.

Hindu priests and Buddhist monks, who accompanied the traders in these voyages, helped spread Indian thought. Folklore singers and artists in the region popularised and modified Indian literary works by retelling stories and incorporating local elements. The *Ramayana* and *Mahabharata* have been changed over the years, and various versions of them are present in Southeast Asia.

India's historical relationship with Southeast Asia continues to be studied by scholars in both regions. In addition to scholarly or journalistic accounts, Southeast Asia appears to be a source of inspiration for Indian writers who use it as a setting in their works of fiction. The same can be seen in the literature by writers from Southeast Asia's Indian diasporic community, who weave scenes from India and various countries into their stories. Indian musical rhythms, either from ancient times or modern-day Bollywood movies, can also be heard throughout the region. ■

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UNDERSTANDING INDIA'S TIES TO SOUTHEAST ASIA THROUGH LITERATURE

Novels that delve into the rich and colourful ties between India and Southeast Asia are still nascent. Here, *The ASEAN* is delighted to introduce two literary treasures written by two talented Indian authors. They created compelling fictional characters who navigated real-world events which took them from India to Malaysia, Myanmar, and Singapore—opening our eyes to forgotten histories and diverse cultures and perspectives.

Nimita's Place
by Akshita Nanda

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Nimita's Place tells the story of two Nimitas, two generations apart, who were forced to rebuild their lives after tumultuous events uprooted them from their homeland.

In 1944, Nimita Khosla is a brilliant 17-year-old student who dreams of becoming an engineer and travelling to foreign lands like the heroines of her favourite Agatha Christie novels. She is the only child of an affluent Punjabi Hindu couple in Lahore. After initially resisting an arranged marriage, Nimita succumbs to familial and societal pressure and discontinues her schooling to marry into the Sachdev family, another local wealthy family. As she lets go of her childhood dreams and grows into her role as a young wife and mother, her life takes a sudden turn when her entire family is forced to flee from Lahore to escape the horrors and brutality of the 1947 Partition. She finds initial refuge in Delhi and later, restarts her home life in Bombay, penniless and humbled but hopeful and determined to succeed.

Seventy years later, Nimita Khosla's granddaughter and namesake, Nimita Sachdev, is a molecular biologist working as a cancer researcher at the Singapore General Hospital. She has a fixed work contract, but is seeking to become a permanent resident of Singapore. She wants to start over in a different country after a violent attack left her off-kilter, sidetracked her plans, and soured her view on relationships. She also wants to put distance between herself and her well-meaning but meddlesome family members in Mumbai who are hell-bent on seeing her married.

Nimita's Place is an enthralling story with many underlying themes. While "place" is an overt reference to the niche carved by both women in their new homes, it also alludes to the novel's central theme: the position of women in Indian society. Nimita Khosla lived at a time when society viewed women's education as an asset that elevates the desirability of women in the marriage market. But, it was also a time of transition, when women began questioning their conventional and subordinated roles and realising their value beyond the household. This tension between tradition and modernity resides within Nimita Khosla.

Today, women in India have more agency and can pursue higher education and satisfying careers like her granddaughter, Nimita Sachdev. Still, women's ambition is tempered by cultural expectations to marry and have children. And while women enjoy more freedoms and rights, these do not insulate them from violence or abuse, as experienced by Nimita Khosla's daughter and granddaughter.

The other dominant theme that is explored in the novel is prejudice—ethnic, religious, regional, and class-based. The novel peels back the layers of prejudice that many of the characters (yes, even the two women protagonists!) harbour against people they regard as foreign "other." The misconceptions, animosity, and conflict between Hindus and Muslims are prominently depicted, but there are also scenes and dialogues hinting at the discomfort or ill-feelings that exist between light-skinned and dark-skinned Indians, Singaporeans and foreign workers, and Chinese and Indians. If there is one takeaway from the story's multicultural encounters (such as those between Nimita and her neighbour, Hafeeza), it is that proximity, exposure, and communication can pierce the wall of ignorance and intolerance and lead to civility, if not

friendship, between people from different backgrounds.

The author did an impressive job taking readers from 1940s Lahore, Delhi, and Bombay to present-day Mumbai and Singapore. As the story unfolds, we are given a crash course on Indian history and culture. We learn about their elaborate rituals for courtship, wedding, and funeral. We are introduced to their complex kinship terms and honorifics, and even their interesting taboos and superstitions. We also get a glimpse of the lush foodscape not only of India but Singapore as well.

Overall, the novel strikes a perfect balance between entertainment, information and reflection, and leaves readers with a feeling of satisfaction that the main characters have found their sense of place at the story's conclusion.

Nimita's Place is the debut novel of Akshita Nanda, a resident of Singapore who was born in Pune, India. It was published in 2018 by the Singapore-based publishing house, Epigram Books. It won several awards including the Singapore Literature Prize 2020 (English, Fiction category). The novel's e-book edition is available for download at Amazon, Barnes & Noble, and Google Play. ■
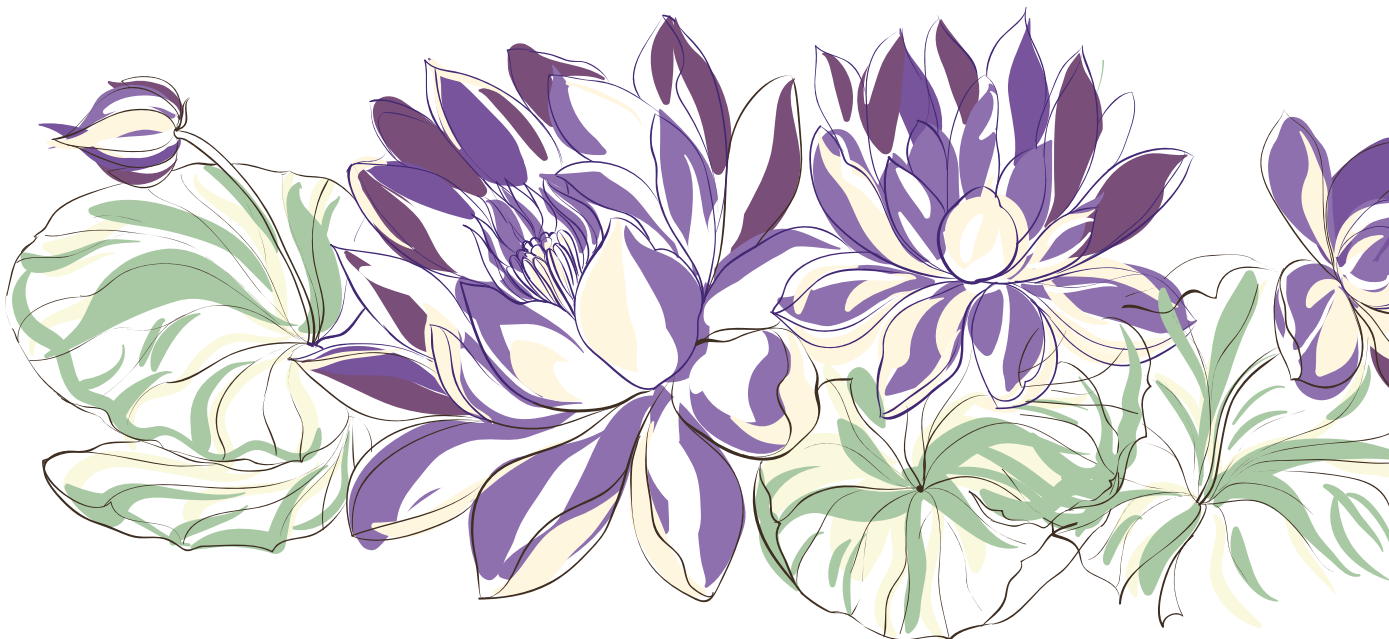
The Glass Palace by Amitav Ghosh

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The Glass Palace is a sweeping historical saga that takes the reader from the lively streets of Mandalay, Myanmar to coastal Ratnagiri, India and to a rubber plantation at the foot of Gunung Jerai, Malaysia. It weaves together the lives of three families across three generations. Through the eyes of Rajkumar, an orphan fisher-boy who rises to fortune, the reader is introduced to major socio-political events from 1885 to the late 20th century, which has shaped Myanmar, India, and Malaysia.

The novel begins with Rajkumar arriving in Mandalay from Chittagong right after the Third Anglo-Burmese War where he witnesses the British takeover that forced the Burmese royal family into exile in India. Seeing Dolly, the young maid to the royal family, he falls in love at first sight and, through a series of events, finds her in India, marries her, and brings her back to Myanmar.

Dolly's quiet daily struggles in India and Myanmar provide rich insights into prevailing gender norms that govern women's lives, regardless of their social position. She is conflicted about her loyalty to the royal family and the possibility of another life. Later, she faces internal conflict in her role as a wife and mother. Her friend Uma, the revolutionary widow of an Indian Administrative Officer, challenges these norms. Uma travels to Europe and the United States of America and takes leadership in the fight for India's independence.

After gaining a fortune in the timber industry, Rajkumar invests in the rubber industry. Here we start to see an exploitative element to his character. The stark contrast between the homes and everyday lives of plantation owners and workers is clearly illustrated. Uma describes the conditions on the plantations as "the American South before the Civil War of Uncle Tom's Cabin." Readers are also provided with a glimpse into the ships' conditions that transported indentured plantation workers from South India. We learn that Rajkumar has fathered a son, Ilongo, with a plantation worker.

The book captures Southeast Asia's characteristics, which are its high levels of migration and ethnic diversity. Through the intermingling of its many characters, late 19th century Mandalay provided an ideal background to show the richness of Southeast Asia's diversity. Ma Cho, who provided shelter to the young Rajkumar when he first arrived in Mandalay, is half Burmese and half Indian. Her companion, the widower Saya John, comes from Melaka. Saya's late wife was a Chinese lady from Singapore.

Unfortunately, in the latter half of the novel, we see growing resentment in Myanmar towards the Indians who run most of the shops and are seen to have taken over the farmlands through money lenders. Burmese marrying Indians are seen as traitors and their children as outcasts. Dolly, Rajkumar, and their sons face harassment and challenges to remain in Myanmar.

The Glass Palace addresses the irony of one colonial subject, mainly Indian soldiers, being used to suppress another colonial subject, the people of Myanmar. The dilemma faced by Indian soldiers fighting for a British empire is a running theme throughout the book. Uma's ambitious nephew, Arjun, struggles with his role as an officer in the British Army. Sent to Malaysia on the eve of World War II, he is mistaken as a plantation worker when out of uniform and treated poorly. A series of events makes him realise that he has to choose between defending the Empire and joining India's Independence Movement.

Through side stories, readers are also introduced to contemporaneous events in other parts of Southeast Asia, such as King Chulalongkorn of Thailand touring Europe, the first Asian monarch do so, while King Thebaw of Myanmar reads about it in exile, and the uprising of Indian soldiers stationed in Singapore. We are also introduced to Southeast Asia's culinary delights, such as *gulai tumis* (fish cooked with pink ginger flower buds), prawns roasted in pandan leaves, and other Peranakan meals prepared at Morningside rubber plantation, and fried *baya-gyaw*, yellow spilt fritters, served by Ma Cho to her customers.

Twenty years on, this book remains a valuable contribution towards demonstrating the rich ties between countries in the region even before the formation of ASEAN, and understanding the deep historical and cultural links between Southeast Asia and India.

The book is written by Amitav Ghosh, a multi-awarded author from India, whose literary works have focused on Indian and Southeast Asian identity. The electronic version of the book is available in various online stores. ∎
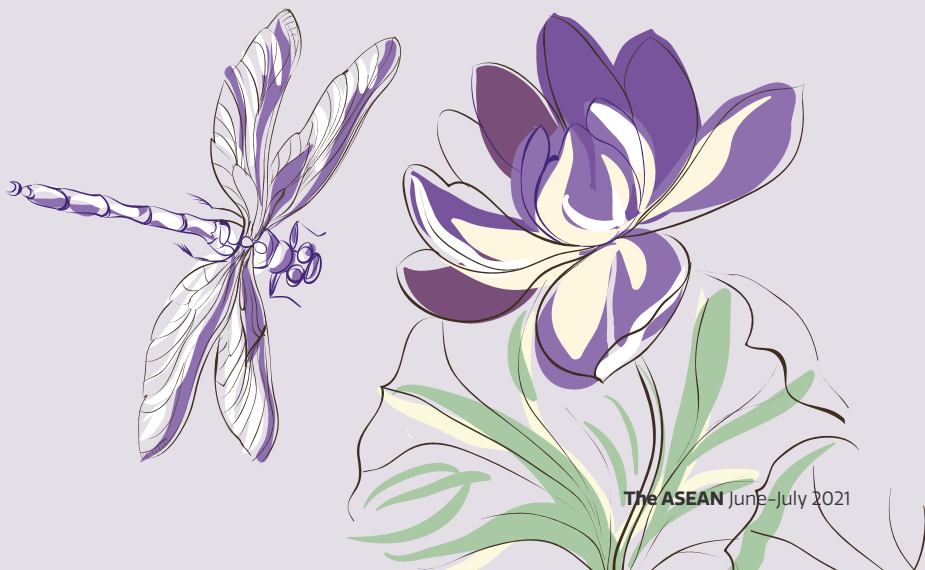
THE BEATS OF
INDIAN-SOUTHEAST ASIAN TUNES

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Indian music is a reflection of the rich cultural traditions and history of India. Its unique sounds have created legions of fans around the world and influenced the global music scene.

Indian music history can be traced back to approximately 10,000 years ago when the earliest evidence of music activity was found on the cave wall paintings at Bhimbetka rock shelters in Madhya Pradesh. But the foundation of Indian music came much later in the form of *Samaveda*, one of the four ancient Vedic texts believed to be composed between 1,200 to 900 BCE and contained texts that were chanted in seven pitches.

Types of Indian Music

Hindustani from northern India and *Carnatic* from the south are two main classical music genres in India. Hindustani was not only influenced by ancient Hindu musical traditions, but also by Persian features, while Carnatic was heavily grounded in Hinduism and often reflects a history and mythology from the Dravidians cultures, World Music Network notes.

Both Hindustani and Carnatic share three common parts in their musical systems: raga (the patterns of notes that form a melody), tala (the rhythmic patterns), and drone (the sustained notes played throughout the passage). *Sitar*, *tabla*, *veena*, and *tambura* are some instruments that use these systems. The musicians often improvise during their performance because of the oral tradition of teaching and learning of Indian music which focuses on passing down short musical pieces rather than long compositions, according to The Kennedy Center.

Folk music is also popular in India. Often associated with dance, folk music is performed at local celebrations to bring communities together. Folk music comes in many forms, such as Lavani, Bhangra, Sufi folk-rock, Bengali, and Rajasthani.

Indian pop music is perhaps the most popular music genre, thanks to Indian films songs, or *filmi*. Taking the roots from Indian classical music, filmi usually combines pop and modern beats to produce catchy tunes. The genre has captivated not only the people in the subcontinent, but also worldwide. Pop star Britney Spears sampled a Bollywood movie in the 1980s for the iconic high-pitched melody in her hit song, *Toxic*.

Experiments in blending Indian and western sounds took place over the course of the 20th century. In the 1960s, many western rock groups introduced Indian elements into their music that influenced the birth of raga rock. Another notable east-west fusion took place in the 1970s when English guitarist John McLaughlin collaborated with Indian instrumentalists L. Shankar, Zakir Hussain, and Vikku Vinayakram in the acoustic ensemble Shakti, producing an authentic jazz-rock sound.

Indian Music in Southeast Asia

The continuous influx of people originating from India to Southeast Asia has played an important role in popularising Indian music and assimilating its elements in the region's cultural and religious practices. As a result, the influence of Indian music is highly recognisable in the region's music scenes.

Malaysia offers a wide variety of music genres, reflecting the country's mix of Malay, Chinese, Indian, and indigenous populations. As it is home to more than two million ethnic Indians, most of whom are ethnic Tamilian from southern India, Carnatic has become the dominant sound among the group. For instance, Tamil folk music *urumee melam* is popular nowadays among the Indian communities. In India, *urumee melam*, named after double-headed drums *urumee,* is played in temples, but in Malaysia, it is performed during festivals or cultural shows. Besides Indian music's popularity in the ethnic music scene, more Malaysian Indians artists have also emerged in the country's contemporary music field like pop and hip-hop.

Indonesian soundscape is also familiar with Indian rhythms. *Dangdut* is a popular music genre in Indonesia that was originally associated with Malay orchestra and Indian film music from the 1950s and 1960s. The term dangdut is coined from the sound produced by *tabla*, the Indian twin-hand drums, that could be written *dang* and *ndut*. In the early 1970s, Rhoma Irama, known as the "King of dangdut," brought the sound and performance style of American and British rock music into dangdut, making dangdut sound more vibrant. Dangdut has since evolved into several forms, like rock-pop dangdut, disco dangdut, koplo dangdut, and hip-hop dangdut.

In Thailand, despite having incorporated Buddhist practices, coronation ceremonies are deeply influenced by Indian civilisation and Brahmin beliefs, and music is an integral part of such ceremonies, the Bangkok Post reports. The flow of cultural exchanges also affected the shape of musical instruments, like *chakhe*, a two-string zither-type of instrument which had

been used since the early 14th century of the Ayutthaya period. *Chakhe* is similar to Cambodian *krapeu* and Burmese *mi gyaung*.

Many musical instruments in the region also pick up their terms from India, such as *kacchapi* and *kamsa*. *Kacchapi* is the Sanskrit form of boat lutes found in the Philippines and Indonesia, also known in various languages as *kudyapi*, *kecapi*, *husapi*, *sampeq*, among others. *Kamsa* or *gangsa*, which means bell-metal in Sanskrit, meanwhile, refers to flat gongs in northern Luzon (Philippines), metallophones in Java and Bali (Indonesia), and musical ensemble or *gamelan* in high Javanese. ◼

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Lao PDR*

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