

# The ASEAN



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**DOUBLE ISSUE**

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## COVID-19 VACCINES FOR ALL



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### **THE INSIDE VIEW**

Vaccine Rollouts  
Across the Region

### **CONVERSATIONS**

Everyone Needs a Shot  
– and Soon

### **SNAPSHOTS**

The ASEAN  
Development Outlook



Ministerial Bodies

\*) takes guidance from and reports to both AMCA and AMRI

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**ASOEN**-ASEAN Senior Officials on the Environment

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13

## IN THIS ISSUE

### COVID-19 Vaccine Rollouts Across the Region

Viewpoint: Budi G. Sadikin Minister of Health of the Republic of Indonesia	6
Cambodia's COVID-19 Vaccines Rollout	10
Or Vandine, PN, MD, MPH, Secretary of State and Spokesperson of the Ministry of Health, Cambodia	13
The Vaccine Race and the Global Fight Against COVID-19	18
Vaccine Rollouts Across ASEAN	20
Vaccines for Children	20
Cows, Cash, and Other Perks: Incentivising Vaccination	24
COVID-19 Vaccine Tracker: Where are ASEAN's vaccines coming from?	24
COVID-19 Vaccines Designed and Made in Thailand	43
Kiattibhoom Vongrachit, MD Permanent Secretary, Ministry of Health, Thailand	42
Building Vaccine Security and Self-Reliance	45
Vaccines Factsheet	45

### Vaccines for All

Towards a Fast and Equitable Distribution of COVID-19 Vaccines	21
Battling the Pandemic in South-East Asia Amid Vaccine Shortages and More Contagious Variants	27
The Way Forward: Achieving Access for All to Safe and Effective COVID-19 Vaccines in the South-East Asia Region	30
Addressing the Changing Pandemic Environment to Protect the Health and Wellbeing of Children	37
EU and ASEAN—Working Together to Ensure that No One is Left Behind The Way Forward	40

### Conversations

Vaccine Diaries	33
Carina Joe	48
Vaccine Research Scientist	48

### Insight

Misinformation and Disinformation in a Pandemic	50
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### Snapshots

ASEAN Humanitarian Assistance to Support the People of Myanmar	52
ASEAN Development Outlook Examines the Region's Progress Towards Inclusive and Sustainable Development	55
54th ASEAN Day Celebration "We Care, We Prepare, We Prosper"	58

### Bridges

An Enduring Friendship: India and Southeast Asia Relations	59
Exchanges for Peace and Prosperity between India and ASEAN	62

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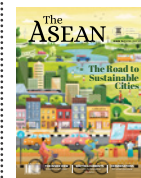
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# Message from the Deputy Secretary-General



Almost two years into the pandemic, yet for all of us, managing the impacts of this pandemic is still a steep learning curve.

We know that the COVID-19 vaccines work. They have demonstrated effectiveness in helping slow down transmissions, protecting people from severe illness, and preventing the breakdown of our healthcare systems. Although we know that the vaccines are not the cure, they have bought us time to fill the gaps, manage our responses, and sustain health measures against this deadly disease.

The pandemic, however, has underscored the vast divide among peoples and countries. The World Health Organization (WHO) says about 80 per cent of the world's vaccines have been administered in wealthier nations. These countries are reaching their vaccination targets and providing booster shots for specific age groups. In contrast, millions in poor and middle-income nations, including those in the ASEAN region, have yet to receive their first or second shot.

Safe, effective, and affordable vaccines need to be accessible to everyone, or we do not stand a chance of beating the pandemic soon.

This issue of *The ASEAN* magazine attempts to paint a picture of the region's current COVID-19 vaccination landscape. As with the rest of the world, our countries face devastating surges in COVID-19 cases caused by new and more infectious variants of the virus.

Indonesia, the current chair of the ASEAN Health Ministers Meeting, Cambodia, and Thailand enlighten us on the progress of their national vaccination rollout strategies. The pace of vaccinations across the ASEAN Member States is increasing steadily, but we all face similar challenges of vaccine shortages, logistics, and hesitancy among our people.

Securing the needed vaccine supplies is only half the battle. Getting them into people's arms quickly through a systematic vaccination drive is equally important.

We asked ASEAN citizens to share their personal vaccination stories, including their motivations, views, and actual experiences queuing for vaccination.

Vaccine donations from ASEAN's partners are pouring in through bilateral and multilateral arrangements like the COVAX facility, established to ensure the equitable distribution of vaccines. COVAX is on track to achieving its target of providing close to two billion doses by the end of 2021. CEO of Gavi, The Vaccine Alliance, Dr. Seth Berkley, stresses in his article that this prolonged health crisis necessitates sustained international collaboration for the continued funding, research and development of effective vaccines.

International partnerships and technology transfer can help accelerate ASEAN's push to build capacity for vaccine production, including through the ASEAN Vaccine Safety and Self-Reliance (AVSSR) platform. Several ASEAN Member States are already conducting COVID-19 vaccine trials or partnering with global manufacturers to establish production hubs in the region and eventually make vaccines more accessible to our people.

I would like to thank our colleagues and partners from ASEAN, WHO, the European Union, and UNICEF for contributing their critical thoughts and reflections on the ways forward.

Ultimately, the pandemic has pushed us to recognise—now more than ever—that the power of collaboration for the common good is what will move us together to overcome this battle and prepare us for the next one.

**Kung Phoak**  
Deputy Secretary-General of ASEAN for  
the ASEAN Socio-Cultural Community





# The Inside View

The World Health Organization (WHO) has set vaccination targets of 10 per cent of each country's population by September, 40 per cent by the end of 2021, and 70 per cent globally by mid-2022.

Over six billion vaccine doses have been administered worldwide, but 80 per cent of those are in high- and upper-middle income countries.

In this issue, *The ASEAN* gives you an inside view of the region's efforts to reach these targets and ensure there are enough COVID-19 vaccines for all.

Viewpoint:

# Budi G. Sadikin

Minister of Health of the Republic of Indonesia

**Minister Budi G. Sadikin explains Indonesia's strategy for securing an adequate and steady supply of COVID-19 vaccines, the progress of its national vaccination rollout, and approaches to addressing vaccine hesitancy. As current chair of the ASEAN Health Ministers Meeting, he also outlines key regional initiatives designed to facilitate Member States' recovery from the COVID-19 pandemic and enhance preparedness and resilience against future public health crises.**



**C**an you describe Indonesia's COVID-19 vaccine rollout strategy and how is this being financed?

What is the status of implementation, and how far has Indonesia achieved its targets? Are there initial studies indicating the effect of mass vaccination on vaccinated communities or sectors? What has been the contribution of the private sector to the vaccination programme?

**Minister Sadikin:** Since the COVID-19 cases were detected in Indonesia, the Government of Indonesia has been actively ensuring the availability of the COVID-19 vaccine. The target of the current vaccine security policy is to vaccinate 70 per cent or 181.5 million of the population. Now, we have increased the target to more than 208 million people, 12 years of age and older, to be vaccinated within a year until January 2022 towards achieving national herd immunity. To meet the needs of national COVID-19 vaccination, Indonesia has two strategies:

- i. The short-term strategy is to secure vaccines through bilateral procurement and dose sharing of multilateral cooperation.
- ii. The middle/long-term strategy is vaccine research and development by research institutes and universities. Several ongoing vaccine developments are using various platforms. Some of them are in the pre-clinical trial phase.

Indonesia is fully aware that the pandemic cannot end before all the countries in the world have won the battle against the COVID-19 pandemic. In this connection,



Indonesia is committed to and actively participates in pushing the fair and equitable access principles of COVID-19 vaccines through the COVAX Advance Market Commitment (AMC). AMC is a platform within the COVAX Facility that will ensure every country will receive supplies of vaccines regardless of their financial status.

As of 26 September 2021, Indonesia has managed to secure 209,116,796 vaccine doses, 88 percent or 185,031,665 of which have been distributed to districts across the country.

Indonesia's COVID-19 vaccine rollout strategy is risk-based and follows the WHO Strategic Advisory Group of Experts (SAGE) recommendations. Indonesia's roadmap and technical guidelines of vaccination rollout consist of three stages.

- i. The first stage of vaccination set a target of 1.46 million people and was conducted from January–June 2021. It was aimed at the health personnel in 34 provinces.
- ii. The second stage of vaccination started in February 2021 and prioritised the elderly above 60 years old and public officials with a total target of 38.4 million people.
- iii. The third stage started in July 2021, and it targets 141.6 million people residing in high transmission areas and a wider population group.

As of 28 September 2021, more than 49.6 million and about 88.5 million people have received their first and second doses, respectively. So far, our maximum daily vaccinations have reached 1,500,000 per day, and we are aiming to increase that to more than 2,000,000 vaccinations a day with the help of the police and army to mobilise the masses and reach the grass-roots level.

The Government of Indonesia has established two types of vaccination schemes. The first one is the *Vaksinasi Program*, in which the government bears the funding. This programme first began on January 13, 2021. *Vaksinasi Program* also covers diplomatic representatives, international non-profit organisations, international educational workers, and foreigners above 60 years old.

The second one is *Vaksinasi Gotong Royong* (VGR); this scheme allows private and state-



**Indonesia is fully aware that the pandemic cannot end before all the countries in the world have won the battle against the COVID-19 pandemic.**

owned companies to purchase vaccines for their employees, families, and other related individuals in the employee's family. This scheme will complement the *Vaksinasi Program* in increasing and accelerating vaccination coverage.

The Government appointed state-owned enterprises, PT. Bio Farma, as a single distributor of vaccines to healthcare facilities across the country for the vaccination programme. It also has the role of procuring vaccines for VGR.

The Government of Indonesia is engaged with the private sector to accelerate the coverage of COVID-19 by opening vaccination posts in public places owned by the private sector, such as shopping centres and drive-thru vaccination sites.

The World Health Organization has issued a guideline on how to assess COVID-19 Vaccine Effectiveness (VE); it shows that evaluating the effectiveness of vaccines in a community requires a complex methodology and the result might be biased. Indonesia has a mechanism to report, collect, and analyse data on the side-effects of vaccination to evaluate the safety of vaccines in the community. There is no significant number of severe side-effects of vaccination reported so far.

Several studies are conducted at a small scale, providing us a rough picture of vaccination protection to those who have been inoculated. One study was conducted by the Research and Development Agency of the Ministry of Health of Indonesia to evaluate the effectiveness of inactivated SARS-CoV-2 vaccine to the severity of COVID-19 infection symptoms and its treatment, as well as the death toll among health personnel in the Jakarta region from January to March 2021. This study reveals that the Sinovac vaccine effectively prevents 96 per cent of health personnel from being hospitalised and prevents deaths by 98 per cent due to COVID-19. Another study conducted by the local

Kudus district government in Central Java in June 2021 found that only 308 vaccinated health personnel were exposed to COVID-19 or around 5.13 per cent of the total number of 6,000 health personnel. Most of them had only mild symptoms and they eventually recovered and started to work again.

**Indonesia has committed to the COVAX facility but also announced it wants to decrease its dependence on imported vaccines and to scale up onshore production of vaccines, particularly Sinovac. How is Indonesia ensuring a steady supply of COVID-19 vaccines amid a global shortage to meet the WHO's vaccination target of at least 10 per cent of the population of every country by September, at least 40 per cent by the end of 2021, and 70 per cent by the middle of next year?**

**Minister Sadikin:** The issue that Indonesia is facing is not vaccination capacity but rather vaccine supply. However, we are lucky that we have secured vaccine doses, both delivered and pledged, to vaccinate 200 million Indonesians. The vaccine delivery schedule is concentrated in the last quarter of 2021 and will put immense pressure on our health professionals to vaccinate as many Indonesians as possible in the last quarter of the year.

To scale up vaccine production, bulk deliveries of Sinovac vaccines which come in several batches, need to be filled and packaged into multiple doses by our state-owned enterprises, PT. Bio Farma, while still maintaining the content, profile, quality, efficacy, and safety according to the standards of vaccine processed in manufacturing countries.

For the longer term, Indonesia is currently developing our local vaccine. Out of seven candidates, two vaccine candidates are moving ahead faster than the others. The first one is a local vaccine from the recombinant protein subunit developed

by the Eijkman institute in partnership with PT. Bio Farma. The second one is a local vaccine from inactivated virus developed by Airlangga University in partnership with PT. Biotis.

Indonesia is also participating in the WTO TRIPS waiver program as a co-sponsor in which we are promoting the temporary waiver of intellectual property protections for COVID-19 vaccines to enable the scaling up of global vaccine manufacturing capacity. Hopefully, this will enable Indonesia to build vaccine manufacturing in the country as well as in Southeast Asia.

**Indonesia has tried to strike a balance between containing the pandemic and re-opening the economy. What is the rationale behind this strategy? How has the recent surge in COVID-19 cases and the detection of other variants in the country affected Indonesia's response and vaccination strategies? Is inoculating children aged 12-17 part of this new strategy to control the spread of new variants and attain herd immunity?**

**Minister Sadikin:** In response to the recent surge of COVID-19 cases, the first strategy to control COVID-19 transmission lies in *public social and health measures*. Every pandemic from time to time demands people to change their behaviour. This time, COVID-19 urges us to wear masks, wash hands, and keep our distance. Indonesia is currently implementing emergency public activity restrictions in high transmission areas, particularly in Java and Bali.

We are also implementing the second strategy in curbing this pandemic, detection, including testing and tracing. We are now massively increasing our testing. Before, we started at 30,000 tests per day, now it is reaching more than 200,000 tests per day, and we are aiming for 400,000 tests a day. We already have 780 PCR labs in the country that can provide testing facilities for all islands across the country.

We also have 12 genome sequencing labs in Indonesia that have been networked together so we can sequence more frequently. Since mid-June 2021, we have enhanced our sequencing capacity to more than 800 variants testing. We are aiming every month to sequence 1,000 samples from across the country to identify the new

mutations, and prevent transmission across the country. The new mutation is most likely to spread across the country since it is more transmissible. Therefore, it is imperative to establish a network of labs among ASEAN countries.

The third initiative is vaccination. We sped up the national vaccination target to more than one million jabs per day. We allocated 50 per cent of vaccinations for high-risk areas and places with high public mobility. Since a vaccine certificate is required for travelers, we also provide vaccination centres at airports, train stations, and ports.

The data from the recent COVID-19 surge in Indonesia shows that almost 260,000 COVID-19 cases were coming from children age 12-17 years old with a 0.18 per cent Case Fatality Rate (CFR). In response to the data, the National Agency of Drug and Food Control has issued Emergency Use Authorization (EUA) for the Sinovac vaccine to be used for this group of young population from 12-17 years old on 27 June, 2021. Therefore, we started vaccinating this age group since July 2021.

These three strategies are for healthy people to prevent them from infection, while the last initiative is therapeutic which aims to treat the sick. Since there is an increase in hospitalisation, we classified cases and managed hospitalisation triages, and continued to monitor those in home-isolation. As a result, we converted around

30-40 per cent of total hospital bed capacity to hospital beds for COVID-19 patients. In addition, the government provided additional centralised isolation facilities for COVID-19 patients with mild to moderate symptoms. Securing a steady supply of oxygen and medicine is key, especially since some of the medicines under the category of antivirus are very difficult to get in the country and globally because of their short supply. Currently, we are supported by the private sector and global partners to secure medical devices related to oxygen and medicines. We also mobilise human resources, tapping both medical interns and medical students.

**What is the government's strategy in addressing the issue of COVID-19 vaccine hesitancy in Indonesia, particularly among rural dwellers, older persons, and even parents who are resistant to inoculating their children?**

**Minister Sadikin:** The vaccination campaign started last year. The Ministry of Health of Indonesia developed a National Communication Strategy of COVID-19 Vaccine and designed various educational media formats as guidelines for republishing and modifying COVID-19 messages. We have produced short messages, education advertisements, e-book questions and answers about COVID-19 vaccines, and infographics for all forms of media. In addition, we promote the motto "I'm ready to be vaccinated," which is now widely known in social media. So far, we consider the mass



Photo Credit: © Galih Yoga Wicaksono/Shutterstock





campaign effective and successful in increasing public confidence in COVID-19 vaccination.

Regardless of the strategies and efforts made in the vaccination campaign, Indonesia still faces challenges. Large quantities of COVID-19 vaccines are urgently needed to meet the target. We also continuously fight hoaxes, provide factual information, and educate the public on the benefits, safety and efficacy of COVID-19 vaccines. This may help to overcome vaccine hesitancy and increase public confidence in COVID-19 vaccination.

To increase access to vaccination for the elderly, the government persuades, registers, and transports the elderly with help from their family members. The government also provides transportation services to pick up and drop off the elderly, conduct door-to-door vaccination, organise vaccination in the nearest places to the elderly in the village, and do evening vaccination.

### **Has the COVID-19 immunisation programme affected Indonesia's other immunisation efforts against other preventable diseases? How is this being addressed?**

**Minister Sadikin:** Massive vaccination programmes have indeed affected other immunisation programmes. We noticed that there is a downward trend in routine immunisations, and we identified and found several factors that cause it: (i) The hesitancy of parents to bring their children to healthcare facilities as they are afraid of COVID-19 transmission; (ii) Closure of immunisation services due to social restriction or COVID-19 cases found in the healthcare facilities.

To address this problem, the Ministry of Health issued guidelines regarding immunisation services in primary health care facilities. These include four main points: keeping a safe distance, separating COVID-19 from non-COVID-19 patients, scheduling services to prevent crowds, and stressing the implementation of strict health protocols for both health personnel and patients.

**With Indonesia as the current Chair of the AHMM and SOMHD, what has your leadership contributed to ASEAN's goals of improving the cooperation on**

### **COVID-19 response and ensuring health is reflected in all policies, particularly now as we move towards post-COVID-19 recovery and ASEAN post-2025.**

**Minister Sadikin:** The ASEAN Health Sector has synergised and scaled up its efforts in responding to COVID-19 and future public health emergencies.

There are ongoing mechanisms within the ASEAN Health Development Agenda and ASEAN Health Clusters that support the ASEAN Member States in responding to the COVID-19 pandemic, such as ASEAN Emergency Operations Centre (ASEAN EOC) Network for Public Health Emergencies, ASEAN Risk Assessment and Risk Communication (ARARC), ASEAN Plus Three Field Epidemiology Training Network (ASEAN+3 FETN), Regional Public Health Laboratories Network, and ASEAN BioDiaspora Virtual Centre (ABVC).

There are 11 new health initiatives, including the establishment of the ASEAN Centre for Public Health Emergencies and Emerging Diseases (ACPHEED) as the first organisational instrument to manage and coordinate resources and whole aspects of health response. Following the adoption of the ASEAN Strategic Framework for Public Health Emergencies, the ASEAN Public Health Emergency Coordination System (APHECS) programme is developed to support the implementation of this framework. APHECS is a multi-year programme that aims to institute a region-wide formal whole-of-ASEAN mechanism to better prepare for and respond to public health emergencies. It also aims to harmonise existing, ongoing, and upcoming relevant initiatives.

The ASEAN Health Sector has also been actively engaged in the development and implementation of non-health sector initiatives. There are five non-health sector initiated efforts, including the ASEAN Strategic Framework for Public Health Emergencies and Regional Reserve of Medical Supplies for Public Health Emergencies.

Collaboration and solidarity are critical in this extraordinary, unprecedented global health crisis. It requires the cooperation of the international community. The cooperation with Dialogue and Development Partners

was been harnessed and has resulted in assistance and new initiatives that aim to enhance the current response and ensure future preparedness. These include:

- Enhancing Detection Capacity for COVID-19 in the ASEAN Member States with the Republic Korea (ROK);
- Development of an ASEAN Portal for Public Health Emergencies with Canada and Germany;
- Establishment of the ASEAN Centre for Public Health Emergencies and Emerging Diseases with Japan and Australia;
- Formulation of the ASEAN Public Health Emergency Coordination System with the United States;
- Cross Border Contact Tracing and Outbreak Investigation Protocol and Health Protocol Development with Germany;
- Continuation of relevant programmes for COVID-19 through the Mitigation of Biological Threats Programme supported by Canada;
- Technical assistance and exchanges, and provision of medical supplies and equipment at bilateral and regional levels with China, ROK, and Canada;
- WHO cooperation with ASEAN, supported by the European Union EU, which includes activities in ASEAN Member States and a component of support to regional coordination for a better response to COVID-19.

The ASEAN Health Sector will ensure that these various initiatives complement the existing efforts towards achieving ASEAN resilience. The whole mechanism, both ongoing and new initiatives, will shape the architecture of ASEAN in responding to current and future public health emergencies, leading to a significant adjustment of the upcoming Work Programme of ASEAN Health Clusters.

To conclude, no nation can tackle COVID-19 pandemic exclusively. As a region, we should work cohesively so that we can do it better and faster. When the winds of change blow, many tribes build walls, but only a few tribes build windmills. Following this quote, Indonesia, as a nation, should see the pandemic, not only as a danger, but as an opportunity to build vaccine security and self-reliance, as well as a stronger and resilient healthcare system that will protect our people from future pandemics. ■

# Cambodia's COVID-19 Vaccine Rollout

**OR VANDINE, PN, MD, MPH**

SECRETARY OF STATE AND SPOKESPERSON OF THE MINISTRY OF HEALTH OF CAMBODIA

**Dr. Vandine is the Chair of the Ad-Hoc Committee for Rolling Out COVID-19 Vaccination Throughout the Country (ACC-19), and Chair of the Sub-Committee of Education, Training, and Public Communication and Spokesperson of the Inter-Ministerial Committee to Combat COVID-19.**

Cambodia has one of the highest vaccination rates among the ASEAN Member States. It is also one of a small number of nations that have authorised the vaccination of children and adolescents against COVID-19, including 6 to 12-year-olds. Dr. Vandine shares with *The ASEAN* Cambodia's vaccination rollout strategy.

Safe and efficacious vaccines are essential tools for responding to the COVID-19 pandemic. While vaccines were still under development in early 2020, the Royal Government of Cambodia (RGC) had started developing a national deployment and vaccination plan (NDVP). Despite the limited availability of vaccines globally, in January 2021, the RGC targeted to vaccinate 10 million population aged 18 years and above by June 2022.

After the completion of the NDVP, the Ministry of Health also developed the Operational Guidelines, Protocol and Vaccine Risk Communication and Community Engagement Plan to assure the safe delivery of vaccines and ancillary items, vaccinate priority target populations, and implement a successful vaccination rollout.

Leadership matters! Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia (Samdech Prime Minister), has been continuously providing his extraordinary leadership, strategic advice and guidance for the



COVID-19 vaccination rollout. He instructed the whole-of-government approach and engaged the armed forces, volunteers, and the private sector for COVID-19 vaccine deployment and vaccination. During the planning, the RGC set the principles for the COVID-19 vaccine deployment and vaccination plan and these include:

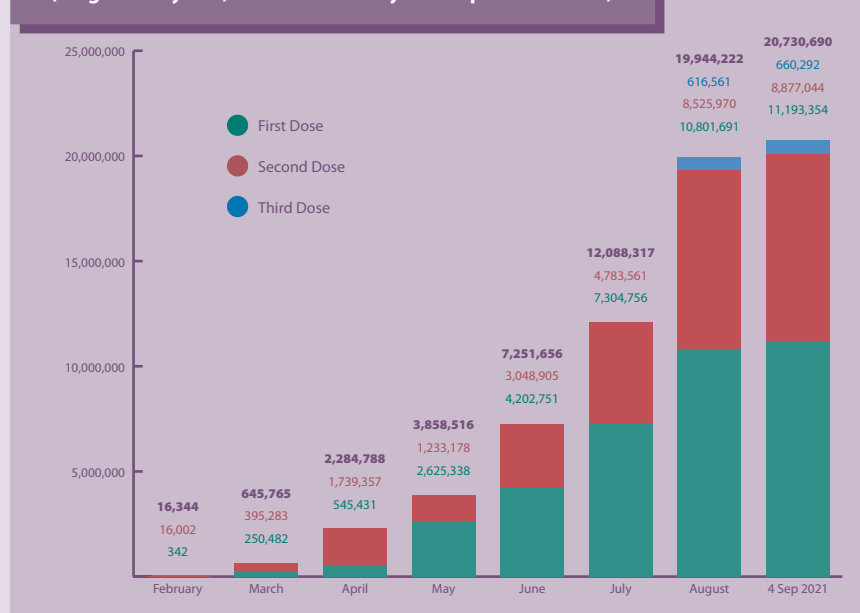
- Recognise that safe and efficacious vaccines are powerful tools for preventing COVID-19 cases and ending the pandemic

- Government leadership and country ownership and coordinated partners' support
- Adopt measures with a country context and a practical approach
- Fully utilise existing systems, mechanisms, resources, capacities, and structures
- Identify additional capacities and resources needed for uncertain situations to ensure successful implementation
- Use COVID-19 vaccination as an opportunity





**Chart 2: COVID-19 Vaccine Administered by Month**  
(Target: ≥12 years, from 10 February to 4 September 2021)



regular media interviews and announcements to share guidance, and updating information to prevent misinformation and vaccine hesitancy. Furthermore, the Ad Hoc Committee conducted an education campaign in August 2021.

In recognition of achievements in the vaccination roll-out, a “One-Million Milestone COVID-19 Vaccination Award” has been established to encourage best practices and speedy COVID-19 vaccination rollouts. Each millionth person who receives a vaccine is given a Samdech Prime Minister’s award.

As of 4 September, Cambodia has administered more than 20 million doses. It has achieved 95.33 per cent and 88.77 per cent vaccination coverage, for first and second dose respectively, of 10 million target population of 18 years of age and above. By 4 September 2021,

- 98 per cent HCWs were fully vaccinated. 95 per cent and 78 per cent elderly received first and second dose respectively;
- 84.42 per cent of the target population of nearly 2 million targeted children between 12 and under 18 years of age were vaccinated with the first dose;
- 94 per cent and 74 per cent of the target population of almost 12 million targeted population aged 12 years and above

received first and second doses of the vaccine, respectively;

- 69.96 per cent of the total population of 16 million were vaccinated with the first dose the vaccine.

During the last seven months, there has been huge progress in vaccination coverage. It is observed that the vaccination rollout might be completed by October 2021, eight months ahead of schedule. However, the RGC will continue to provide booster doses to other vulnerable groups, provide vaccination to children under 12 years old, as per scientific evidence and global recommendations.

At the same time, epidemiological data reveals that the number of cases and deaths are declining in Cambodia due to a combined approach of vaccination response, risk-based and targeted non-pharmaceutical interventions, improved health care capacities, and risk communication and community engagement.

While remarkable progress has been made in the vaccination rollout, RGC is planning to conduct mop-up vaccinations, by making public announcements, and getting health facility staff and local authorities to conduct house to house visits in villages where vaccination had been completed.

Experiences and lessons learned from the COVID-19 vaccination rollout are an asset for Cambodia and will be widely used for advancing the existing immunisation and health systems. The Cambodia National Immunisation Programme of the Ministry of Health is developing the National Immunisation Strategy (NIS) for 2021-2025 and using lessons learned and best practices from the COVID-19 vaccination rollout. With many others, the RGC has been planning to transform the COVID-19 e-system to an e-immunisation registry for routine immunisation of life course; develop a framework to reach the unreached for childhood immunisation; expand immunisation delivery for adults, especially the elderly; and enhance the adverse event following immunisation (AEFI) surveillance system, particularly in improving detection and reporting.

Cambodia’s high vaccination coverage among priority target groups and percentage coverage among the entire population places it as one of the highest performing countries in the WHO Western Pacific Region. Leadership, early and effective planning, good governance, sectoral approach, coordination, timely secure adequate vaccine supplies, involvement of local authorities, volunteers such as Samdech Techo Voluntary Youth Doctor Association (TYDA), Cambodian Youth Federation and the armed forces, community engagement and monitoring are crucial to the success of the COVID-19 vaccine rollout in Cambodia. Strong and brilliant leadership support from Samdech Prime Minister, proactive hard work and collaboration from the various committees and the local authorities, especially under the management of the ACC-19 Chair, and the contribution and participation of the Cambodian people are paying off. All these are critical to the success of the nation in the COVID-19 vaccination campaign.

It is important to acknowledge the unprecedented efforts and investments by the World Health Organization and other partners to develop and make vaccines available in the shortest possible time, along with the overall effort of the country in rolling out its vaccination campaign as part of the global response to the COVID-19 pandemic. ■





# The Vaccine Race and the Global Fight Against COVID-19



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**JENNIFER DELA ROSA**  
SENIOR OFFICER, HEALTH DIVISION  
ASEAN SOCIO-CULTURAL COMMUNITY DEPARTMENT

**It has been almost two years since the outbreak of the SARS-COV-2 virus, which caused the COVID-19 pandemic, and the global community is still battling against its devastating impact. So far, the disease has resulted in millions of cases and deaths worldwide, loss of livelihood, economic downturns, and disruptions in trade and the flow of essential goods and other supplies.**

**I**t is now a race against the mutation and spread of SARS-COV-2, even as COVID-19 vaccines rollout are ongoing worldwide. National policy and programmes on COVID-19 response are constantly being developed, implemented, revisited, and viewed by every country, including the ASEAN Member States, to respond appropriately to the pandemic and ensure a flexible but steady journey towards recovery. To complement the COVID-19 vaccine rollout campaigns and programmes, sustaining tried and tested public health and social measures for infection prevention and control are

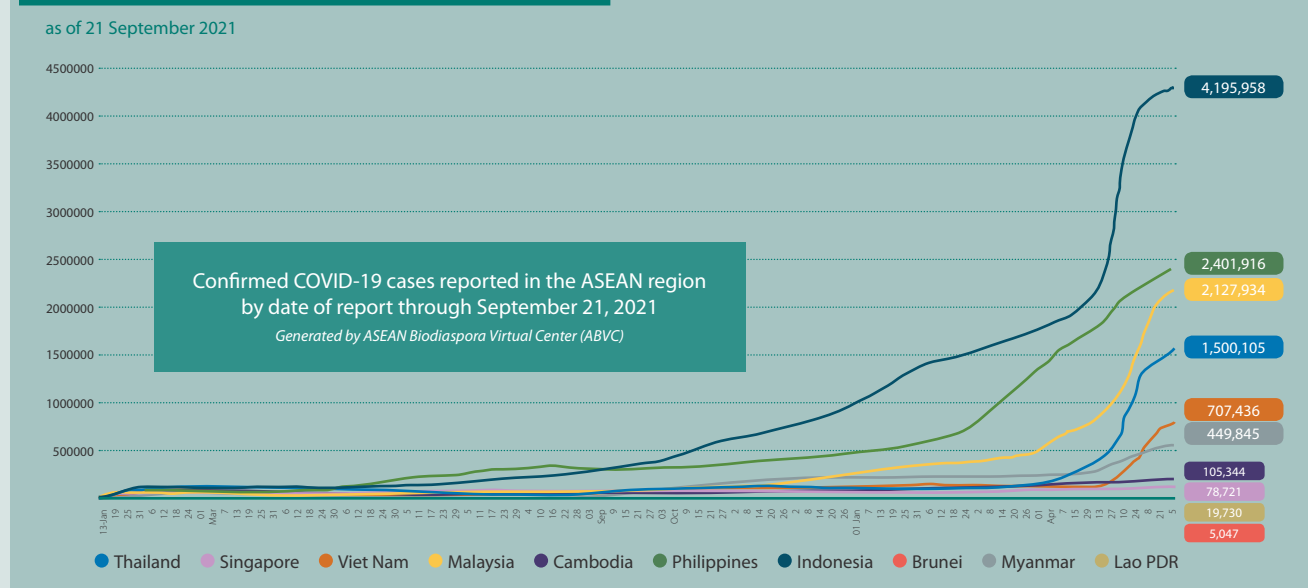
continuously advocated and enforced by the ASEAN Member States. Several vaccine-producing ASEAN Member States have also endeavoured to contribute to COVID-19 vaccine development to address the mutating SARS-COV-2.

## **SARS-COV-2 and Its Variants**

Since the December 2019 alert on cases of a respiratory syndrome of unknown cause in China, the World Health Organization (WHO) says the virus has spread to more than 220 countries and territories. Nearly 231 million cases of COVID-19 have been documented globally, with almost five

million deaths as of 22 September 2021 (WHO, 2021; ASEAN, 2021). Around this period, the ASEAN region accounted for more than 11 million cases, with an upward epidemiologic trend (Figure 1) in most of the ASEAN Member States and more than 254,000 deaths. Owing to the virus's characteristics and its widespread transmission in populations, the likelihood of viral mutations has increased. The recent surge of confirmed cases and deaths in many countries have been attributed to the variants of concern (WHO, 1 March 2021) of the SARS-COV-2 virus.

Figure 1: COVID-19 Epidemiologic Curve in ASEAN



Source: COVID-19 Situational Report in the ASEAN Region, ASEAN BioDiaspora Virtual Centre, 21 September 2021

Based on the COVID-19 Weekly Epidemiologic Update published by the WHO, as of 14 September 2021, cases of the Alpha variant were reported in 193 countries, territories, and other areas. The Beta variant was detected in 142 countries; the Gamma variant in 96 countries; and the Delta Variant in 180 countries (WHO, 14 September 2021). The recent uptrend in infections, due to the increased cases of the Delta Variant, has also been reported in the ASEAN Member States. More stringent policies have been brought back to contain the spread of this more communicable variant in communities and to prevent the overwhelming of the already fragile health systems in the region.

According to the WHO, the emergence of SARS-CoV-2 variants, which posed an increased risk to global public health, necessitated the characterisation of variants of interest and variants of concern (WHO, n.d.). In late 2020, the WHO began classifying the SARS-CoV-2 variants to reinforce global efforts on monitoring and research, and to provide information on the ongoing response to the COVID-19 pandemic. Assessing the evolution of the virus and its variants is a global undertaking, and the WHO

has been monitoring it with partners, expert networks, national authorities, institutions, and researchers since January 2020.

A variant of interest (VOI) is defined by the WHO as a SARS-CoV-2 variant with genetic changes that are predicted or known to affect virus characteristics such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape. It is also identified to cause significant community transmission or multiple COVID-19 clusters in multiple countries with increasing relative prevalence alongside increasing number of cases over time, or other apparent epidemiological impacts to suggest an emerging risk to global public health (WHO, n.d.; emphasis added). The current VOIs, and where they were first identified include Eta (multiple countries), Iota (US), Kappa (India), and Lambda (Peru). (Table 1)

A variant of concern (VOC), on the other hand, is defined as a SARS-CoV-2 variant that meets the definition of a VOI and, through a comparative assessment, has been demonstrated to be associated with one or more of the following changes at a degree of global public health significance namely, increase in transmissibility or detrimental change in COVID-19 epidemiology; or increase

in virulence or change in clinical disease presentation; or decrease in effectiveness of public health and social measures or available diagnostics, vaccines, therapeutics (WHO, n.d.; emphasis added). (Table 2)

### Public Health and Social Measures

Public Health and Social Measures (PHSM) are comprised of interventions implemented not only by international organisations and national and local governments but also by organisations, communities, and individuals to curb the spread of COVID-19 and other communicable diseases. Wearing of appropriate masks, frequent hand washing, and observance of social distancing are just some of the COVID-19 measures advocated since the beginning of the pandemic.

Evidence has shown these measures to be effective in reducing COVID-19 cases and hospitalisation and in preventing deaths (WHO, 14 June 2021). Tracking of PHSM is being done by the WHO to collate data and provide a structure and taxonomy to these measures. Also included as PHSM are infection prevention and control measures such as contact tracing, surveillance, and genomic sequencing that aid in monitoring the SARS-CoV-2 trends and variants.

### COVID-19 Vaccines in ASEAN

Vaccines are one of the most cost-effective and established global public health interventions used in the prevention of devastating infectious diseases. Access to safe and effective vaccines is a critical intervention that will help end the COVID-19 pandemic.

Through global and regional cooperation and solidarity in the COVID-19 response, enormous possibilities have been realised to support the availability and equitable distribution of COVID-19 vaccines globally. Such is the Gavi Advance Market Commitment for COVID-19 Vaccines (Gavi COVAX AMC), which is a mechanism that finances the procurement of COVID-19 vaccine doses for 92 low- and middle-income economies around the world (Berkley, n.d.). To support vaccine equity and to help ensure that no one is left behind, the WHO set out subsequent global targets to vaccinate at least 10 per cent of the population in every country by September 2021, at least 40 per cent by the end of 2021, and 70 per cent by the middle of 2022.

The Access to COVID-19 Tools (ACT)-Accelerator was established to contain the COVID-19 pandemic faster and more efficiently by ensuring that successful diagnostics, vaccines and treatments are shared equitably across all countries (WHO, 9 September 2020). The vaccine pillar of the ACT-Accelerator is the COVAX facility that is co-led by CEPI, Gavi, and WHO, with UNICEF as the key delivery partner. COVAX aims to hasten the development and manufacturing of COVID-19 vaccines and ensure fair and equitable access for every country in the world.

As of July 2021, there are 292 vaccine candidates with 108 vaccines under clinical development and 184 in pre-clinical development (WHO, 17 September 2021). A number of vaccine-producing ASEAN Member States, such as Indonesia, Thailand, Singapore, and Viet Nam have also endeavoured to contribute to COVID-19 vaccine development and manufacturing. To date, seven COVID-19 vaccines have received validation for emergency use from the WHO, and have been deployed in countries including ASEAN Member States (Table 2).

**Table 1: Currently Designated Variants of Interest**

SARS-CoV-2 Variant	Earliest Documented Samples	Date of Designation
B.1.525 (Eta)	Multiple countries, December 2020	17 March 2021
B.1.526 (Iota)	United States of America, November 2020	21 March 2021
B.1.617.1 (Kappa)	India, October 2020	4 April 2021
C.37 (Lambda)	Peru, December 2020	14 June 2021
B.1.621 (Mu)	Colombia, January 2021	30 August 2021

Source: WHO <<https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>>

**Table 2: Currently Designated Variants of Concern**

SARS-CoV-2 Variant	Earliest Documented Samples	Date of Designation
B.1.1.7 (Alpha)	United Kingdom, September 2020	18 December 2020
B.1.351 (Beta)	South Africa, May 2020	18 December 2020
P.1 (Gamma)	Brazil, November 2020	11 January 2021
B.1.617.2 (Delta)	India, October 2020	VOI: 4 April 2021; VOC: 11 May 2021

Source: WHO <<https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>>

**Table 3: COVID-19 Vaccines Validated by WHO by Manufacturer/ WHO EUL Holder as of 2 July 2021**

Manufacturer/ WHO EUL holder	Platform	WHO's Decision Date
Pfizer BIONTECH	Nucleoside modified mRNA	31 December 2020
AstraZeneca University of Oxford	Recombinant ChAdOx1 adenoviral vector encoding the Spike protein antigen of the SARS-CoV-2	16 April 2021
Serum Institute of India	Recombinant ChAdOx1 adenoviral vector encoding the Spike protein antigen of the SARS-CoV-2	15 Feb 2021
Janssen Johnson and Johnson	Recombinant, replication-incompetent adenovirus type 26 (Ad26) vectored vaccine encoding the (SARS-CoV-2) Spike (S) protein	12 March 2021
Moderna	mRNA-based vaccine encapsulated in lipid nanoparticle (LNP)	30 April 2021
Sinopharm	Inactivated, produced in Vero cells	07 May 2021
Sinovac	Inactivated, produced in Vero cells	01 June 2021

Source: WHO <[https://extranet.who.int/pqweb/sites/default/files/documents/Status\\_COVID\\_VAX\\_02July2021.pdf](https://extranet.who.int/pqweb/sites/default/files/documents/Status_COVID_VAX_02July2021.pdf)>



As part of the efforts to ensure adequate supplies and make vaccines available globally, 18.7 billion doses have been secured and more than 278 million doses have been shipped to 141 countries through COVAX, as of 15 September 2021. The price per vaccine dose ranges from 2 US dollars to 37 US dollars (UNICEF, 2021).

The vaccines that ASEAN Member States have procured through bilateral and multilateral arrangements, and have received through the COVAX contribute to their national vaccine campaigns and programmes. Based on the COVAX data, from March to June 2021, ASEAN Member States such as Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, and Singapore have received COVID-19 vaccines through the COVAX facility.

The European Union has coursed its substantial support to the ASEAN

Member States through a multilateral route, including the COVAX mechanism. The EU and ASEAN have committed to fair, equitable, and affordable access to COVID-19 vaccines. Figure 2 below shows EU's vaccine sharing efforts to ASEAN Member States amounting to more than 32 million doses.

The progress of vaccinations in ASEAN Member States is monitored through the ASEAN Biodiaspora Virtual Centre. Based on its report, though the ASEAN Member States have been steadily progressing in terms of the vaccine coverage through their vaccine roll out programmes, a majority of the Member States have yet to reach their national and global targets (Figure 3).

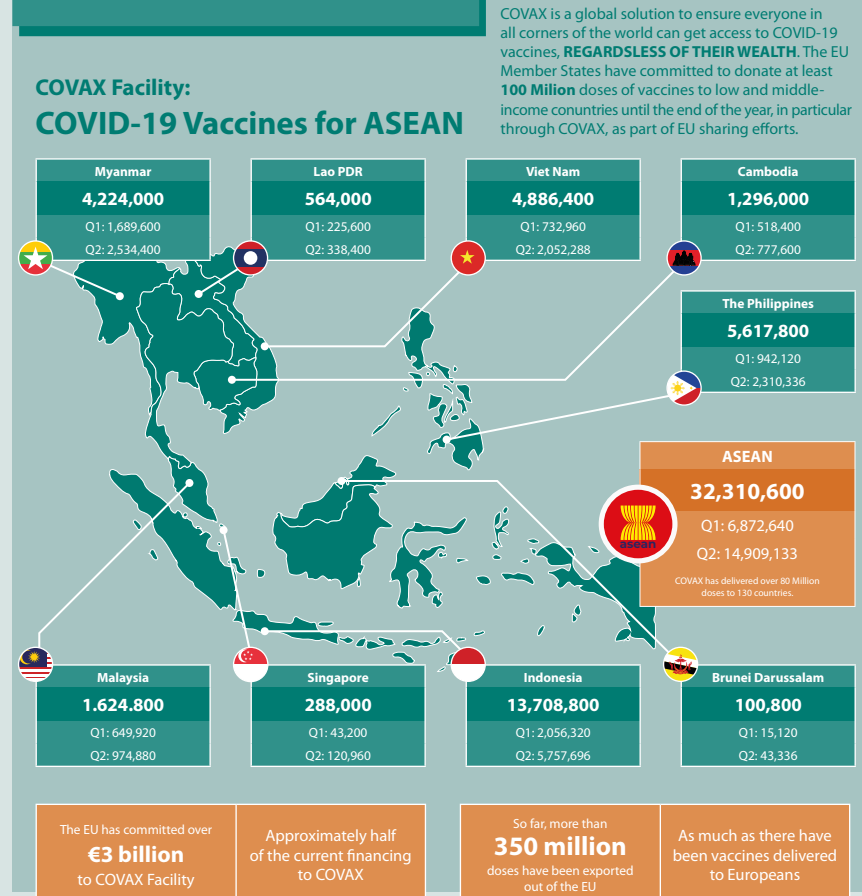
Apart from limited access to safe and effective vaccines, other health system factors are affecting the rate of vaccination. These challenges include the availability

of human resources for health to support the vaccination programme; providing cold chain maintenance and protection; sourcing transportation to reach remote areas; and, maintaining a steady supply of personal protective equipment and medical supplies necessary to support the vaccination programme.

To contribute to the global and AMS interventions, at the regional level, the ASEAN Leaders' Declaration on ASEAN Vaccine Security and Self-Reliance (AVSSR) paved the way for the development, endorsement, and implementation of the Regional Strategic and Action Plan on AVSSR 2021-2025. It has five strategies which include the following:

- i. Advance AVSSR into global policy level
- ii. Support the effective procurement strategies and establish the regional stockpiling mechanism
- iii. Establish or strengthen information sharing platforms to support AVSSR
- iv. Strengthen the capacity of the key stakeholders to achieve vaccine security in ASEAN
- v. Establish a monitoring and evaluation mechanism for the implementation of the plan, including communication and coordination mechanisms

**Figure 2: EU's Vaccine Commitment in Doses to ASEAN Member States as of June 2021**



Source: EEAS <[https://eeas.europa.eu/sites/default/files/eu\\_covax\\_asean\\_factsheet\\_jun2021.jpg](https://eeas.europa.eu/sites/default/files/eu_covax_asean_factsheet_jun2021.jpg)>

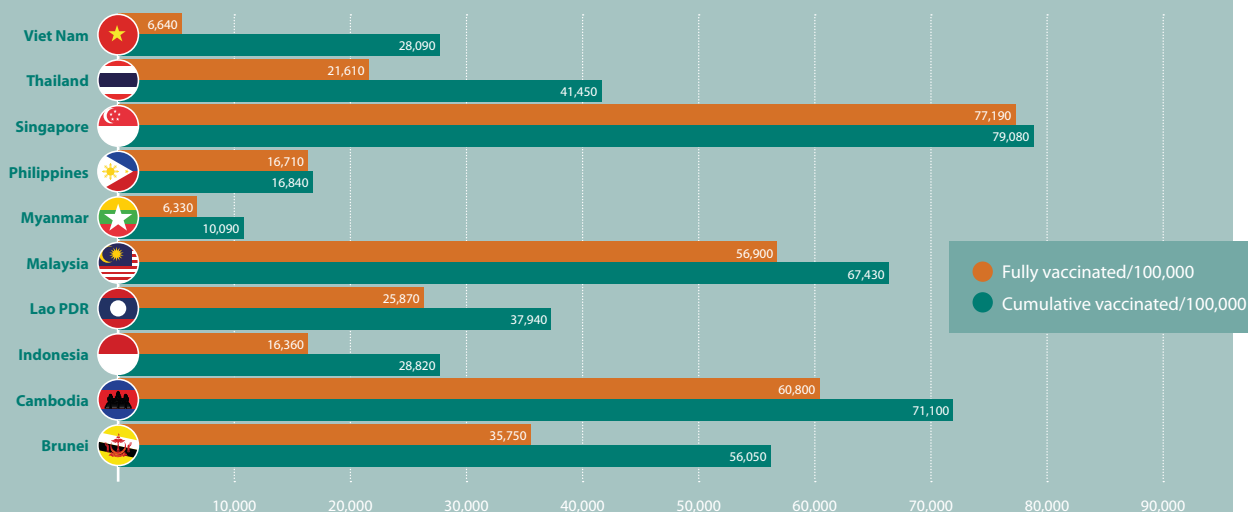
### Vaccine Hesitancy, Infodemic, and COVID-19

*Vaccine hesitancy* is one of the challenges affecting current efforts to achieve the objectives of the national COVID-19 vaccine roll out programmes. It is one of the 10 threats to global health identified by WHO in 2019, and is defined as the "delay in acceptance or refusal of vaccines despite availability of vaccination services". According to the WHO Sage Working Group on Vaccine Hesitancy, the lack of confidence, complacency, and the inconvenience of accessing vaccines are some of the common factors that underlie this complex concept.

*Vaccine confidence* refers to the effectiveness and safety of vaccines, the system that delivers them, including the reliability and competence of the health services and the health professionals and the motivations of the policy-makers who decide on the needed vaccines. *Complacency* happens when perceived risks of vaccine-preventable diseases are low, and vaccination is not deemed

Figure 3: Fully Vaccinated per 100,000 Population in ASEAN

## COVID-19 Vaccination Status as of 21 September 2021



Source: Situational Analysis Report, ASEAN BioDiaspora Virtual Center, as of 21 September 2021

necessary as a preventive measure. *Convenience* refers to the physical availability, affordability and willingness-to-pay, geographical accessibility, ability to understand, quality of services and delivery in consideration of the cultural context and appeal of immunisation services affect uptake (WHO, 1 October 2014). Additional factors are *calculation* which pertains to an individual's efforts to weigh costs and benefits, and *collective responsibility* pertains to the willingness to protect others from infection through one's vaccination.

The COVID-19 pandemic is also aggravated and plagued by what is referred to as an information epidemic or "infodemic." Apart from information on the SARS-CoV-2 and its variants, there is also the prevalence of misinformation, disinformation, fake news, in traditional and social media platforms that churn out unverified and dubious information

from non-credible sources. This infodemic undermines evidence-based information, contributes to vaccine hesitancy, and places people in vulnerable, even deadly situations.

Generally, approaches to address vaccine hesitancy are designed to be multi-pronged to increase knowledge, awareness, and vaccine uptake among the public. These approaches should counter misinformation and disinformation by building a communication ecosystem. Effective, appropriate, and sustained online and offline vaccination campaigns and communication strategies are a must to change people's attitudes and behaviours, and to positively transform people's perceptions to help them make informed decisions about COVID-19 vaccines.

In targeting key groups, such as unvaccinated or under-vaccinated populations and individuals or

communities, there is a need to deliver transparent, consistent, frequent, appropriate, and positive messages through multiple communication platforms, including social media. Health workers, leaders in the health and non-health sectors, and other influential stakeholders should be empowered to deliver messages that are informed by data and science. Multiple strategies may be employed to counter vaccine hesitancy, and these include policy options such as mandatory vaccinations, sanctions for non-vaccination, different types of incentives, and vaccination reminders and follow-ups.


The development and emergency use of COVID-19 vaccines, within the first year of the pandemic, was unprecedented. Despite the emergence of new variants, the world can still be a step ahead of the virus if preventive health measures are in place, and if safe, effective vaccines are made available to everyone. ■

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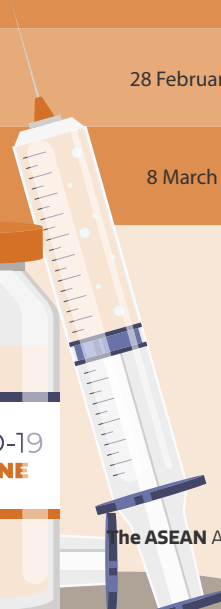
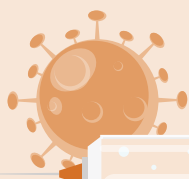
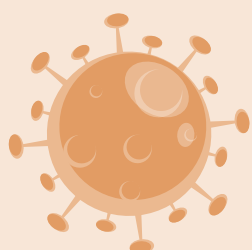
# COVID-19 Vaccine Rollouts Across ASEAN



ASEAN Member States	Total population	Start date
 Brunei Darussalam	433.285	3 April 2021
 Cambodia	16.718.971	10 February 2021
 Indonesia	273.523.621	13 January 2021
 Lao PDR	7.275.556	2 April 2021
 Malaysia	32.750.000	24 February 2021
 Myanmar	54.409.794	27 January 2021
 Philippines	109.035.343	1 March 2021
 Singapore	5.685.807	30 December 2020
 Thailand	69.799.978	28 February 2021
 Viet Nam	97.338.583	8 March 2021

## Sources:

WHO, UNICEF, ASEAN BioDiaspora Virtual Center (ABVC),  
ASEAN Member States' Ministries of Health, reputable news sources





The table aims to provide an overall picture of the vaccination rollout in the ASEAN region vis-à-vis the World Health Organization's vaccination target of at least 10 per cent of the population of every country by September 2021 and 30 per cent by end of 2021. The data were collected from the period 21 to 27 September from the WHO COVID-19 Situation Reports and country updates, ASEAN Biodiaspora Virtual Centre, websites of health ministries, and reputable news sources.

Doses administered		Target vaccination	Progress (percentage of total population vaccinated)
Partial (1st dose)	Full (2nd dose/single-shot dose)		
275,246	178,089	70% of population by end 2021	1st dose: 63.5%; full: 41.1%
12,950,149	10,774,063	13 million or 80% of its total population	1st dose: 77.4%; full: 64.4%
86,747,343	48,671,192	208.265.720	1st dose: 31.7%; full: 17.8%
2,915,317	2,008,738	50% of the population by the end of 2021	1st dose: 40%; full: 27.6%
22,834,060	19,633,681	80% of adult population by Q1 2022	1st dose: 69.7%; full: 59.9%
7.205.913	3.729.758	No available data	1st dose: 13.2%; full: 6.8%
23.626.764	20.307.122	70% of population or 76 million people by end 2021	1st dose: 21.6%; full: 18.6%
4.591.847	4.473.746	80% of total population by Sept 2021	1st dose: 80.7%; full: 78.6%
29.501.110	15.899.158	70% of adult population by end 2021	1st dose: 42.2%; full: 22.7%
27.913.529	6.640.061	at least 70% of population aged 18 and over by early 2022	1st dose: 28.6%; full: 6.8%

## Vaccines for Children

Countries saw a rise in pediatric COVID-19 cases, as the Delta variant surged through the region. Several Member States have authorised vaccinations for children in a bid to protect them against the disease.

ASEAN Member State	Ages of children eligible for vaccination	No. of children vaccinated	Notes
Brunei Darussalam	N/A	N/A	Government has not approved vaccination of children under 18 years of age
Cambodia	6 to 17 years old	588,333	Government has approved vaccination of children aged 6 years old and above.
Indonesia	12 to 17 years old	3,470,894	-
Lao PDR	N/A	N/A	Government has not approved vaccination of children
Malaysia	12 to 17 years old	860,270	Vaccination started on 15 September 2021
Myanmar	No available data	No available data	-
Philippines	12 to 17 years old	0	Government approved emergency use of Pfizer and Moderna for minors aged 12 years old and above. Vaccination of minors with comorbidities will be prioritised and will begin in October 2021.
Singapore	12 to 18 years old	No available data	-
Thailand	12 to 18 years old	0	Bangkok has started to give Pfizer to children aged 12-18 years old with underlying diseases. Government plans to vaccinate children nationwide from 4 October 2021.
Viet Nam	12 to 17 years old	0	Waiting for vaccine arrival

**Sources:** [http://www.moh.gov.bn/Shared%20Documents/COVID-19%20Vaccine/FAQs%20General%20Covid%2019%20Vaccine\\_04032021.pdf](http://www.moh.gov.bn/Shared%20Documents/COVID-19%20Vaccine/FAQs%20General%20Covid%2019%20Vaccine_04032021.pdf), <https://databoks.katadata.co.id/datapublish/2021/08/20/30-juta-orang-indonesia-telah-divaksin-penuh-covid-19>, <https://www.unicef.org/laos/stories/faqs-covid-19-vaccines-lao-pdr>, <https://doh.gov.ph/Vaccines/when-will-the-COVID-19-available-to-me>, <https://www.pna.gov.ph/articles/1142963>, <https://www.pna.gov.ph/articles/1152508>, <https://www.unicef.org/vietnam/press-releases/unicef-offer-maximum-support-vietnam-access-covid-19-vaccines-official>, <https://apnews.com/article/health-education-coronavirus-pandemic-coronavirus-vaccine-bangkok-2521787a558ff4324fae5519c6243fef>, <https://www.rappler.com/nation/covid-19-vaccinations-minors-aged-12-17-to-start-those-with-comorbidities>

## Cows, Cash, and Other Perks: Incentivising Vaccination

Creative schemes some ASEAN Member States have come up with to increase vaccine uptake among their citizens.

ASEAN Member State	Location	Incentives	Description
Cambodia	Thbong Khmum province	USD2,5000	USD2,500 given to 9-millionth vaccinated person
Indonesia	Trenggalek	Goats and chickens	
	Jakarta, other cities	Motorcycles, washing machines, groceries, other promotional goodie bags	Various companies are jumping in to help boost vaccination in Indonesia, offering their products as incentives for people to get vaccinated.
Philippines	San Luis, Pampanga	Cows	"Baka Para sa Bakuna" project, where a cow is to be raffled every month starting from June 2021 for qualified vaccinated residents
	Sucat, Muntinlupa	25kg sack of rice for 25 people	Weekly raffle for qualified vaccinated residents
	Las Piñas City	Grandprize: A house and 2 motorcycles; Monthly raffles: Groceries worth PhP5,000 for 50 people	"May Bahay sa Bakuna: Bakunado Ka Na, May Bahay ka Pa!" program with monthly raffles from July 15 to Dec 23. On Dec 24, the winner for the grandprizes will be drawn.
	Nationwide	Bicycle units	Under the "BakSikleta" programme of the Department of Labor and Employment, economic front-liners who have completed inoculation are eligible to win bicycle units beginning 1 July 2021. One thousand bicycles will be given away in the National Capital Region (NCR) while another one thousand will be given to workers outside the NCR.
Singapore	Singapore	SGD 30 e-vouchers	Singapore's Health Promotion Board offers 30 SGD worth of e-vouchers for those who refer unvaccinated seniors for COVID-19 vaccines
Thailand	Mae Chaem	Cows	A weekly raffle scheduled for 24 weeks, where one lucky vaccinated villager will win a calf worth around 10,000 Baht

**Sources:** Agence Kampuchea Press (AKP) via ASEAN Information Center, <https://www.cnnindonesia.com/tv/20210625092718-405-659221/video-vaksinasi-berhadiah-kambing-dan-ayam-ramai-peminat>, <https://www.suara.com/pressrelease/2021/07/21/193423/yamaha-gelar-vaksinasi-covid-19-gratis-dan-berhadiah-untuk-publik-di-pulo-gadung>, <https://www.pna.gov.ph/articles/1142753>, <https://www.pna.gov.ph/articles/1142753>, <https://www.manilatimes.net/2021/06/09/public-square/rep-villar-unveils-may-bahay-sa-bakuna-vaccine-incentive-program/1802456>, <https://www.pna.gov.ph/articles/1143917>, <https://www.channelnewsasia.com/singapore/covid-19-vaccination-refer-seniors-get-hpb-vouchers-2112726>, <https://www.reuters.com/world/asia-pacific/thai-town-offers-free-cows-boost-vaccine-campaign-2021-05-20/>

# Towards a Fast and Equitable Distribution of COVID-19 Vaccines

**SETH BERKLEY, MD**

CEO, GAVI, THE VACCINE ALLIANCE

**When COVID-19 first emerged, the speed at which it spread across the globe caught the world completely off-guard, triggering the worst global health crisis of our time.**

**S**ome countries, particularly in Southeast Asia, had some experience of dealing with novel coronaviruses, and many other governments looked to them for how to shape their own response. But it quickly became clear that this alone would not be enough to bring the pandemic under control; we needed both vaccines and vaccinations, and lots of them. Until people in all corners of the world were protected—not just those that could afford it—the virus would continue to circulate.

But that presented a number of major challenges. First were the significant scientific and technical hurdles involved in rapidly developing COVID-19 vaccines and producing them in the huge volumes needed. But even if vaccine production was possible—and at the time that was by no means a given—the next challenge was how to make them accessible to everyone. It would take the world's largest and most complex global deployment of vaccines ever to end this pandemic, but how do you make that happen when roughly half the world's population can't afford to pay for them?



What we needed was a global solution to make the availability of vaccines, once they were developed, rapid, fair, and equitable. That solution is COVAX, a global mechanism aimed at ensuring that all participating

countries get access to COVID-19 vaccines and that people who could not afford them—those living in the 92 lower-income countries, accounting for roughly half the world's population—





get them at no cost to themselves. The goal was to avoid a repeat of what happened in 2009 with the swine flu pandemic, where a small number of wealthy countries bought the entire global supply, leaving little for the rest of the world.

With COVID-19, we knew that a similar scenario was likely, that demand for vaccines would be huge, particularly at the early stage when there would be limited doses available. Yet, at the time, no one knew which, if any, of the vaccine candidates would ultimately prove to be safe and effective. With so much uncertainty, it was far from clear which horse to back and how to ensure that there would be enough vaccines to go around once they were available.

Co-led by my organisation, Gavi, the Vaccine Alliance; the Coalition of Epidemic Preparedness Innovations (CEPI); and the World Health Organization, COVAX sought to address this in two key ways. The first was to create a large and diverse portfolio of vaccines candidates and work with manufacturers to ensure that doses could be produced quickly and in the volumes needed the moment vaccines were authorised. But to do this, COVAX also needed to bring countries together to pool both financial resources and demand, to give it the purchasing power necessary to secure doses in the face of huge competition.

Even though COVAX was created with the world's poorest people in mind, the way it was designed means it benefits everyone. That's because it provides equitable access to vaccine doses not only to those who could not afford to pay, but also to the millions of people in dozens of middle-income, and even some high-income economies that can afford doses, but lack the resources to secure them. By providing a mechanism through which all countries could access COVID-19 vaccines fairly, COVAX laid a path through which people in all corners of the world can be protected. Ultimately, this is the solution that is needed to stop the virus from circulating.



**Thanks to the incredible work of the scientific community and vaccine manufacturers, we were able to get not one, but so far 19 safe and effective vaccines authorised for use.**

The world rallied. Thanks to the incredible work of the scientific community and vaccine manufacturers, we were able to get not one, but so far 19 safe and effective vaccines authorised for use, and at record speed—the first one took just 327 days. And the governments of 193 economies came together to support COVAX. Getting this kind of global solidarity around a multilateral solution took time, and it was far from easy. It made it possible, however, for all participating countries to get access to vaccine doses and protect their citizens. The financial mechanism called the Gavi COVAX Advance Market Commitment (AMC), which was mainly funded by donors, provided doses to the 92 low-income countries.

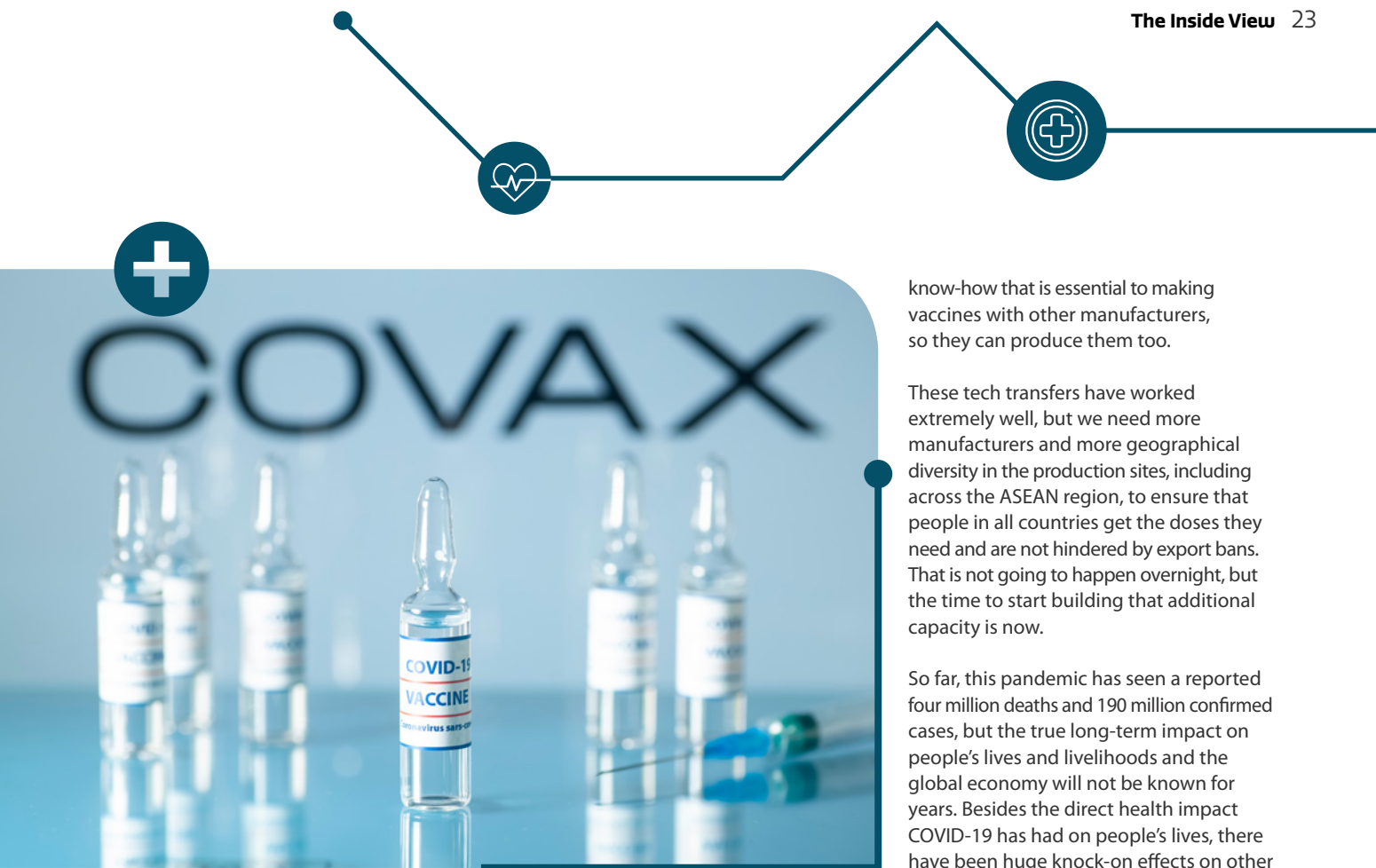
Consequently, we have been able to get vaccines to people in lower-income countries just 39 days after the first COVID-19 vaccines became available in high-income nations. The delivery was two times faster than in the last pandemic in 2009. During the initial rollout, we also delivered seven times the volume of doses to four times the number of countries over a comparable period. By the end of the third quarter, hundreds of millions of doses will have been shipped to well over a hundred countries and economies across the world, including most of ASEAN.

None of this would be possible without the support and leadership of donor governments, like Japan, which hosted the Gavi COVAX AMC Summit in June, where we raised the remainder of the 9.7 billion US dollars needed to cover the costs of AMC doses. We needed to raise sufficient funds to get the gears turning early so that doses could be secured and delivered. We had to overcome substantial technical, regulatory, and logistical

hurdles to ensure that countries had the supply chains, cold storage facilities, trained health care staff, and data systems in place, and all the necessary compensation, liability and indemnification legal safety nets too.

What this shows is that the COVAX model works but we can and must do more. We always anticipated that supplies would be limited during the initial rollout phase because of the intense demand. For this reason, we did not expect our supply lines to ramp up properly until after the summer. Even so, we have experienced serious supply shortages. This is partly because a small number of wealthy countries placed orders for considerably more doses than they needed for their populations—because they were unsure which vaccines would succeed. Then, the devastating second wave in India caused a significant impact on our supply lines as our largest early supplier, an India-based company, diverted its supply for domestic use. As a result, we have so far not shipped as many doses as we had initially planned.

We are still broadly on track to achieve our original target of close to two billion doses by the end of 2021. Still, given the continued spread of the virus and the emergence of dangerous and highly transmissible variants, we need to get there sooner. At a time when some high-income countries have now vaccinated two-thirds of their population, just 1.1 per cent of people in low-income countries have had their first jabs. That is why we are urging governments that either have doses to spare or do not need those allocated to them through COVAX to share them with AMC countries through COVAX.



know-how that is essential to making vaccines with other manufacturers, so they can produce them too.

These tech transfers have worked extremely well, but we need more manufacturers and more geographical diversity in the production sites, including across the ASEAN region, to ensure that people in all countries get the doses they need and are not hindered by export bans. That is not going to happen overnight, but the time to start building that additional capacity is now.

So far, this pandemic has seen a reported four million deaths and 190 million confirmed cases, but the true long-term impact on people's lives and livelihoods and the global economy will not be known for years. Besides the direct health impact COVID-19 has had on people's lives, there have been huge knock-on effects on other vital health services, which will also cost lives and have economic repercussions. Despite decades of immense progress, the latest data suggests that disruptions to routine childhood immunisation services caused by the pandemic led to declines in coverage last year and if it was not for a concerted recovery effort, it could have faced a massive backslide. This decline not only put the lives of millions of children at risk from vaccine-preventable disease but also increased the risk of outbreaks of other diseases.

We still have a long way to go before we see an end to this pandemic's acute phase. ASEAN countries can help by supporting COVAX's mission to achieve global equitable access. As ASEAN is an economic powerhouse, home to some of the fastest growing economies and the fourth largest trading hub in the world, it is in ASEAN's best interest to bring this crisis to an end as rapidly as possible and prepare for the next one. That means building on COVAX's successes and learning from this pandemic by increasing and devolving global vaccine manufacturing so that next time, vaccines get there sooner and ensure that no one is left behind. ■

Many have now responded and committed to share more than 500 million doses with COVAX. Of these, 150 million doses should reach us by the end of the third quarter, before our supply lines ramp back up, which will go a long way to help bridge the shortfall we are experiencing. The rest will enable us to reach more people more quickly, and protect around two billion people in AMC countries by end of the first quarter of 2022, helping these countries protect health care workers, older people and those with comorbidities— around 30 per cent of their population.

Given the current risks posed by the emergence of new variants, we really cannot get there quickly enough. While ongoing research into vaccines that can protect against variants is essential, by far the most effective way to stop variants from emerging is to reduce the ability of the virus to spread. Even though we still do not know the full extent to which different vaccines prevent transmission, the best way to do that is to ensure that all people most at risk are protected as quickly as possible.

COVAX has demonstrated that it is possible to remove the financial barriers to vaccines during a pandemic and provide access. Looking ahead, if we are to be better prepared for the next pandemic—and it is an evolutionary certainty that there will be a next one—we will need to find solutions to speed up access in the face of the vaccine hoarding and vaccine nationalism we have seen, as well as the export bans of vaccines and the vital components needed to make them, all of which have created supply bottlenecks during this pandemic.

The solution to all this has to be through increased global vaccine manufacturing capacity. COVID-19 has required huge volumes of vaccine doses, many more doses than are normally produced each year globally. One reason why we were able to get so many doses so quickly is through the use of technology transfers, where manufacturers share both their intellectual property and the vital

# COVID-19 Vaccine Tracker: Where are ASEAN's vaccines coming from?

The chart includes COVID-19 vaccine doses that ASEAN Member States received from the COVAX facility, obtained from bilateral donors, and secured through bilateral or multilateral agreements. The data were culled from UNICEF's COVID-19 Vaccine Market Dashboard and the website of Gavi, the Vaccine Alliance. They were accessed from 25 to 27 September 2021.



## Brunei Darussalam

### Doses received from COVAX:

AstraZeneca-Vaxzevria	100,800
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### Bilateral donations:

Sinopharm-BBIBP-CorV (donated by China)	152,000
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### Doses secured through multilateral/bilateral agreements:

Moderna-mRNA-1273	50,400
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<b>Unknown:</b>	<b>112,338*</b>
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<b>Total doses available:</b>	<b>415,538</b>
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## Cambodia

### Doses received from COVAX:

AstraZeneca-Vaxzevria (donated by Japan)	1,007,500
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Janssen-Ad26.COV2.S (donated by USA)	1,060,100
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SII-Covishield	324,000
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### Bilateral donations:

AstraZeneca-Vaxzevria (donated by UK)	415,000
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Sinopharm-BBIBP-CorV (donated by China)	3,403,000
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### Private donation:

Sinovac-CoronaVac	500,000
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### Doses secured through multilateral/bilateral agreements:

Sinopharm-BBIBP-CorV	1,000,000
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Sinovac-CoronaVac	17,500,000
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<b>Total doses available:</b>	<b>25,209,600</b>
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## Indonesia

### Doses received from COVAX:

AstraZeneca-Vaxzevria	10,225,000
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AstraZeneca-Vaxzevria (donated by Italy)	796,800**
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AstraZeneca-Vaxzevria (donated by France)	2,563,540
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AstraZeneca-Vaxzevria (donated by New Zealand)	683,000**
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Moderna-mRNA-1273 (donated by USA)	8,000,160
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Pfizer BioNTech-Comirnaty (donated by USA)	3,770,910
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Pfizer BioNTech-Comirnaty (cost-shared between USA and COVAX)	4,644,900**
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Sinovac-CoronaVac	10,776,000
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### Bilateral donations:

AstraZeneca-Vaxzevria (donated by Japan)	2,160,000
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AstraZeneca-Vaxzevria (donated by the Netherlands)	657,000
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Janssen-Ad26.COV2.S (donated by the Netherlands)	500,000
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### Doses secured through multilateral/bilateral agreements:

AstraZeneca-Vaxzevria	2,127,400
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Pfizer BioNTech-Comirnaty	2,795,740
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Sinopharm-BBIBP-CorV	5,482,400
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Sinovac-CoronaVac	157,680,000
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<b>Total doses available:</b>	<b>212,862,850</b>
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### Lao PDR

#### Doses received from COVAX:

AstraZeneca-Vaxzevria (donated by Japan)	616,820
Janssen-Ad26.COV2.S (donated by USA)	1,008,000
Pfizer BioNTech-Comirnaty	100,620
SII-Covishield	132,000

#### Bilateral donations:

Sinopharm-BBIBP-CorV (donated by China)	2,602,000
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**Total doses available: 4,459,440**



### Malaysia

#### Doses received from COVAX:

AstraZeneca-Vaxzevria	1,387,200
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#### Bilateral donations:

AstraZeneca-Vaxzevria (donated by Japan)	1,000,000
Pfizer BioNTech-Comirnaty (donated by USA)	1,000,000
Sinovac-CoronaVac (donated by China)	500,000

#### Doses secured through multilateral/bilateral agreements:

AstraZeneca-Vaxzevria	559,200
CanSino-Ad5-nCoV	200,000
Sinovac-CoronaVac	12,400,000

**Unknown: 25,700,871\***

**Total doses available: 42,747,271**



### Myanmar

#### Doses received from COVAX:

Pfizer BioNTech-Comirnaty (cost-shared between USA and COVAX)	4,048,200**
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#### Bilateral donations:

Bharat-COVAXin (donated by India)	200,000
SII-Covishield (donated by India)	1,500,000
Sinopharm-BBIBP-CorV (donated by China)	3,500,000

#### Doses secured through multilateral/bilateral agreements:

SII-Covishield	2,000,000
Sinopharm-BBIBP-CorV	736,000

**Unknown: 3,065,616\***

**Total doses available: 15,049,816**



### Philippines

#### Doses received from COVAX:

AstraZeneca-Vaxzevria	4,584,000
AstraZeneca-Vaxzevria (donated by Germany)	844,800**
Janssen-Ad26.COV2.S (donated by USA)	3,240,850
Moderna-mRNA-1273 (donated by USA)	3,000,060
Pfizer BioNTech-Comirnaty (donated by USA)	188,370
Pfizer BioNTech-Comirnaty (cost-shared between USA and COVAX)	2,287,350
Pfizer BioNTech-Comirnaty	2,767,050

#### Bilateral donations:

AstraZeneca-Vaxzevria (donated by Japan)	1,124,100
AstraZeneca-Vaxzevria (donated by UK)	415,040
Sinopharm-BBIBP-CorV (donated by China)	1,000,000
Sinopharm-BBIBP-CorV (donated by UAE)	100,000
Sinovac-CoronaVac (donated by China)	1,000,000

#### Private donation:

AstraZeneca-Vaxzevria	582,500
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#### Doses secured through multilateral/bilateral agreements:

AstraZeneca-Vaxzevria	2,811,100
Gamaleya-Sputnik V	380,000
Moderna-mRNA-1273	969,600
Pfizer BioNTech-Comirnaty	3,182,400
Sinovac-CoronaVac	34,500,000

**Total doses available: 62,977,220**





## Singapore

## Doses received from COVAX:

AstraZeneca-Vaxzevria	244,800
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## Doses secured through multilateral/bilateral agreements:

Sinovac-CoronaVac	301,000
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<b>Unknown:</b>	<b>8,631,063*</b>
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<b>Total doses available:</b>	<b>9,176,863</b>
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## Thailand

## Doses received from COVAX:

AstraZeneca-Vaxzevria (donated by UK)	415,000
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Pfizer BioNTech-Comirnaty (donated by USA)	1,503,450
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Sinovac-CoronaVac (donated by China)	1,000,000
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## Doses secured through multilateral/bilateral agreements:

AstraZeneca-Vaxzevria	1,917,000
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Sinopharm-BBIBP-CorV	4,000,000
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Sinovac-CoronaVac	3,500,000
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<b>Unknown:</b>	<b>34,102,566</b>
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<b>Total doses available:</b>	<b>46,438,016</b>
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## Viet Nam

## Doses received from COVAX:

AstraZeneca-Vaxzevria	4,176,000
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AstraZeneca-Vaxzevria (donated by France)	672,000
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AstraZeneca-Vaxzevria (donated by Germany)	852,480
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AstraZeneca-Vaxzevria (donated by Italy)	812,060
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Moderna-mRNA-1273 (donated by USA)	5,000,100
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Pfizer BioNTech-Comirnaty (donated by USA)	1,065,870
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Pfizer BioNTech-Comirnaty (cost-shared between USA and COVAX)	6,333,210**
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## Bilateral donations:

AstraZeneca-Vaxzevria (donated by Australia)	1,500,000**
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AstraZeneca-Vaxzevria (donated by Belgium)	100,000
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AstraZeneca-Vaxzevria (donated by Czechia)	210,000
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AstraZeneca-Vaxzevria (donated by Japan)	3,000,000
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AstraZeneca-Vaxzevria (donated by Poland)	501,600
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AstraZeneca-Vaxzevria (donated by Romania)	100,800
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AstraZeneca-Vaxzevria (donated by Slovakia)	100,000
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AstraZeneca-Vaxzevria (donated by UK)	415,000
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Gamaleya-Sputnik V (donated by Russia)	2,000
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Moderna-mRNA-1273 (donated by Czechia)	40,800
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Sinopharm-BBIBP-CorV (donated by China)	3,700,000**
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## Doses secured through multilateral/bilateral agreements:

AstraZeneca-Vaxzevria	6,710,300
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Pfizer BioNTech-Comirnaty	867,111
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Sinopharm-BBIBP-CorV	2,000,000
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<b>Unknown:</b>	<b>8,047,519*</b>
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<b>Total doses available:</b>	<b>46,206,850</b>
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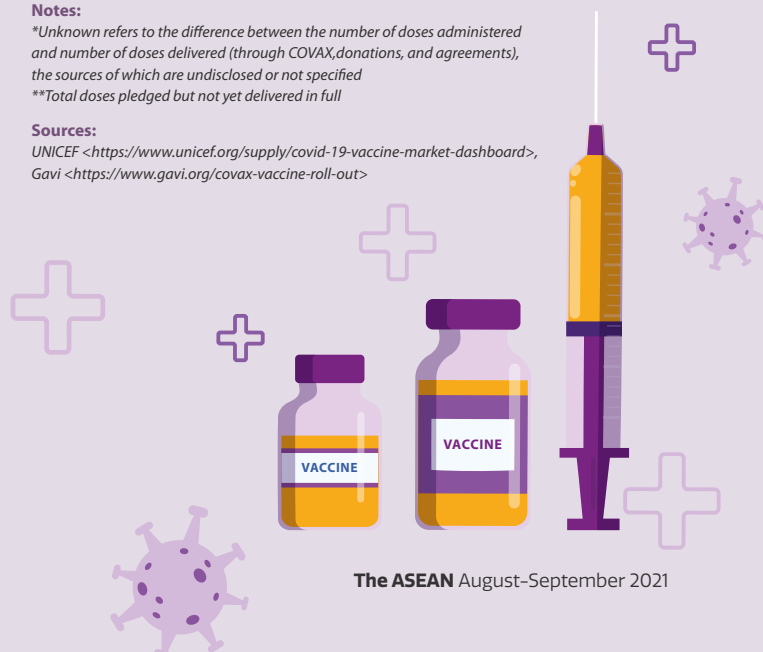
## Notes:

\*Unknown refers to the difference between the number of doses administered and number of doses delivered (through COVAX, donations, and agreements), the sources of which are undisclosed or not specified

\*\*Total doses pledged but not yet delivered in full

## Sources:

UNICEF <<https://www.unicef.org/supply/covid-19-vaccine-market-dashboard>>, Gavi <<https://www.gavi.org/covax-vaccine-roll-out>>



# Battling the Pandemic in South-East Asia

## Amid Vaccine Shortages and More Contagious Variants

**TAKESHI KASAI, MD, PHD**

REGIONAL DIRECTOR FOR THE WESTERN PACIFIC  
WORLD HEALTH ORGANIZATION

**ASEAN countries were among the first to be affected by COVID-19. But for 18 months, we managed to keep the virus's spread below levels experienced in other regions, accounting for less than 5 per cent of global cases and deaths.**

**W**e are now facing our greatest challenge in the pandemic to date, as several countries in the region battle major surges, with the spread of the Delta variant among populations that are largely still unvaccinated.

### **A Strong Foundation**

When COVID-19 was first detected, strong commitments to national and regional health security, as well as past experiences with disease outbreaks including SARS and H5N1, enabled countries in this region to respond quickly and effectively. The investments we had made, working together and strengthening our capacity under the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED, APSED 2010, and APSED III), paid off.

But we are now fighting a variant that is twice as transmissible as the original virus while grappling with global vaccine shortages and inequitable distribution. Our global share of cases and deaths is rising sharply, and even the strongest public health systems in the region are being tested. In some places, health systems are dangerously close to





**It now seems clear that, even with our best efforts, the virus will not disappear globally—at least not in the near future.**



the "red line," where the number of critical cases exceeds ICU capacity, and hospitals can no longer provide the care that people need.

### **Protecting Our Healthcare Workers**

Because of scarcity in the global vaccine supply, distribution initially focused on countries that were experiencing large-scale outbreaks. As a result, many Member States in this region that had successfully suppressed the virus were not prioritised. In these countries, vulnerable populations—healthcare workers and older people—were left waiting for their turn.

In early August, a key milestone was finally reached. All countries and areas in the WHO Western Pacific Region had secured sufficient doses to protect all of their healthcare workers. These include seven ASEAN countries.

Health and other frontline workers have been working tirelessly to protect us during the COVID-19 pandemic. Some have not been home to see their families in months. I am so relieved that the Western Pacific Region has sufficient doses for all of them.

Ensuring every health care worker in every country is vaccinated has always been a top priority for WHO—even in countries and areas which have reported few cases to date. The nature of this pandemic means that COVID-19 can reach every corner of the globe, and every healthcare worker—particularly those who are most exposed to the virus, working on the frontlines—should be fully vaccinated.

More than 33 million vaccine doses have been delivered to the Region by the COVAX Facility, co-led by the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi, the Vaccine Alliance, and WHO, alongside key delivery partner UNICEF, and supported by several ASEAN countries. The remainder were

either produced locally, bought by governments, or donated bilaterally.

This would not have been possible without generous funding and support from governments, the private sector, and philanthropic and multilateral partners.

But we still have a long way to go to ensure that all healthcare workers actually receive their doses, and other priority groups are also protected.

### **Reaching the Next Milestone, Urgently**

While we now have sufficient doses for the region's healthcare workers, the next challenge is securing enough to protect the other priority groups and ensure these are distributed to the people who need them most, such as older people and those with health conditions that make them more vulnerable to severe COVID-19.

In ASEAN countries alone, there are 74 million people aged 60 years or older. We must quickly get enough doses to protect these groups, maintain healthcare capacity, and save lives.

The circulation of the Delta variant makes this even more urgent. Delta has now been reported in more than 160 countries, territories, and areas worldwide. In the Western Pacific Region, countries that had previous success in suppressing the virus are now facing major surges.

### **Delta: A New Major Challenge**

It now seems clear that, even with our best efforts, the virus will not disappear globally—at least not in the near future. And while the virus is spreading anywhere, people everywhere are at risk. With this in mind, each country needs to continue doing all that it can to control the virus, carefully



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including about variants, and continue to support other countries that need their help.

Throughout the pandemic, WHO has supported ASEAN Member States in developing and strengthening national surveillance systems, lab networks, and contact tracing; provided guidance on public health and social measures; and procured essential supplies, such as oxygen concentrators and specimen collection kits.

Likewise, rapid diagnostics and life-saving therapeutics are also vital to end the pandemic and accelerate global recovery. WHO, along with partners of the therapeutics pillar of the ACT-Accelerator, is monitoring 2,800 clinical trials worldwide, and the diagnostics pillar of ACT-A has now facilitated price and volume guarantees for over 120 million new high-quality rapid diagnostic tests for low- and middle-income countries.

assessing and managing the risks in each context. It is especially important for countries that still have few or no cases to remain vigilant. We have seen how quickly Delta can spread once it gets in—and how hard it is to stop.

We know that the best defence against Delta—and the emergence of future variants that could spread even more easily, cause more severe disease, or be resistant to existing vaccines—is to do all we can to suppress transmission now, using all of the available tools. That means vaccinating priority groups, and then whole populations, as quickly as possible, as well as continued application of public health and social measures.

### **Moving Towards the Future We Want**

Vaccines are an essential tool in the effort to protect individuals and reduce the impact of COVID-19 on society, but vaccines alone will not end the pandemic. Combining all of the tools we have at our disposal is the key to limiting transmission.

We must all continue to follow national guidance on mask-wearing, hand washing, physical distancing, and avoiding crowds, close-contact settings and confined spaces, while being ready to get the vaccine as soon as it is our turn.

In late July, the APSED Technical Advisory Group met and discussed the future of the pandemic. They noted that combining the effective use of vaccines and public health and social measures is critical to moving towards a future where COVID-19 becomes an endemic disease that we can learn to live with, through effective action to control transmission and reduce its impact on the health system as well as broader society and the economy.

### **Continued Collaboration is Essential**

Continued collaboration between countries is more important than ever. Member States around the world, including ASEAN members, must stay connected and share information,

All of these life-saving tools will only be effective if they are available to the most vulnerable, equitably and simultaneously in all countries, and if strong health systems and services are in place to deliver them.

Throughout the pandemic, ASEAN Member States and other countries in the WHO Western Pacific Region have truly recognised that no country is safe until every country is safe.

Let us continue in solidarity with equitable distribution of COVID-19 vaccines, information sharing on virus mutations, and technical exchanges on issues such as laboratory testing and clinical management.

We have come this far together; we can and must continue to protect ourselves and each other. ■

### **Note:**

WHO Western Pacific Region covers 37 countries and areas, including seven ASEAN Member States as follows: Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Philippines, Singapore, Viet Nam.

# The Way Forward

## Achieving access for all to safe and effective COVID-19 vaccines in the South-East Asia Region

**POONAM KHETRAPAL SINGH, PHD**  
REGIONAL DIRECTOR FOR SOUTH-EAST ASIA  
WORLD HEALTH ORGANIZATION

**On 30 January 2020, WHO declared the COVID-19 outbreak a Public Health Emergency of International Concern. As of 16 July, almost 200 million cases of COVID-19 have been confirmed globally, including more than four million deaths.**

**T**he WHO South-East Asia Region is the world's third most affected region, with more than 36 million cases and more than 520,000 deaths. Since the beginning of the response, WHO and its Member States and partners have identified and applied a range of tools to control spread, save lives, and minimise impact. Such tools have included the evidence-based implementation of public health and social measures, the joint development of diagnostics and life-saving therapeutics, and the distribution of critical medical supplies, including personal protective equipment and oxygen.

In April 2020, WHO and its partners launched the COVID-19 Vaccine Global Access (COVAX) Facility, which is the vaccine arm of the Access to COVID-19 Tools (ACT) Accelerator, a global collaboration to accelerate the development, production, and equitable access of COVID-19 tests, treatments, and vaccines. Since the launch of the COVAX Facility, a range of safe and effective vaccines have been developed globally, which have since been listed for



emergency use by WHO. Countries in the South-East Asia Region and across the world continue to administer vaccines based on the WHO-listed vaccines for emergency use and the emergency use authorisation provided by national regulatory agencies.

Ten of the Region's 11 Member States have introduced COVID-19 vaccines to respond to the pandemic. As of 20 July 2021, more than 506 million doses of COVID-19 vaccines have been administered in the Region, with 19.3 per cent of people receiving at least one dose of the vaccine





and 5.5 per cent getting both doses. Variability in coverage between countries that have initiated vaccination ranges from 3.3 per cent to 64.2 per cent for the first dose and 0.2 per cent to 47.3 per cent for the second dose. All countries in the Region have designed national vaccine deployment plans focusing on priority groups, including health care and frontline workers, and elderly populations.

Eight vaccines are now available in the Region: AstraZeneca in 10 countries; Sinopharm in seven countries; Pfizer in four countries; Sinovac in three countries; Moderna in two countries; SputnikV in two countries; COVAXin in one country; and Janssen in one country. More than 70 per cent of doses administered in the Region have been of the AstraZeneca vaccine. The majority of doses have been obtained through bilateral deals. The remaining doses have been received from the COVAX Facility, or as donations.

In all countries of the Region, uptake of available vaccines has been high. The Region's average utilisation rate

is 91 per cent. Countries in the Region have vast experience administering large-scale mass vaccination campaigns for other vaccine-preventable diseases, such as polio, measles and Japanese encephalitis, which has proven immensely beneficial in conducting COVID-19 vaccine roll-outs. Effective communication has helped reduce vaccine hesitancy, alongside efforts to counter misinformation and increase awareness of the benefits of vaccination. The lessons learned from the introduction of other new vaccines—such as rotavirus vaccine, pneumococcal conjugate vaccine, human papillomavirus vaccine, and inactivated poliovirus vaccine—have aided national vaccination planning, improving coverage and increasing efficiency.

Measures to ensure robust vaccine pharmacovigilance and risk communication continue to be rigorously implemented. Early detection, analysis, reporting and causality assessment of adverse events following immunisation are critical to maintaining confidence in vaccines. Across the Region, existing committees

for adverse events following immunisation have been strengthened to monitor safety signals and conduct causality assessments. Risk communication continues to be an integral aspect of safety surveillance, ensuring that misinformation does not impact coverage. Limited availability and inequitable access to vaccines continue to be a challenge. The COVAX Facility had aimed to cover 20 per cent of the population of all participating countries with COVID-19 vaccines by the end of 2021. At current vaccination rates, the world will not meet this target. High-income and upper middle-income countries have achieved a much higher percentage coverage compared with lower-middle-income and low-income countries. While



the development of COVID-19 vaccines has been exceedingly fast, the supply cannot currently meet demand. This has resulted in a slowing down of vaccination in several countries, including those reliant on COVAX vaccines. This has led to a two-track pandemic, defined by each country's access or lack thereof to vaccines.

Achieving vaccine equity demands extraordinary action and global collaboration. Efforts to increase country access to equitable supplies continue to be initiated, including through the removal of barriers to scale up manufacturing and the waiving of intellectual property rights. In addition, international organisations and other stakeholders must work collaboratively at all levels to develop, test, and scale up production of safe, effective, quality, affordable vaccines, diagnostics, therapeutics, and medicines. To help do that, the WHO-supported COVID-19 Technology Access Pool (C-TAP) aims to increase global sharing of intellectual property, knowledge, and data with quality-assured manufacturers, focusing on establishing public health-driven, voluntary, non-exclusive and transparent licenses.

Several countries globally now have a surplus of vaccine doses and are increasingly donating them to the COVAX Facility. G7 Leaders have pledged 870 million doses of vaccines to low- and lower-middle-income countries. Such donations must continue to be mobilised to ensure that some people in all countries are provided access to vaccines, rather than all people in some countries. To facilitate the uptake of donated vaccines, the COVAX Facility is supporting countries in the region and across the world to scale up cold chain capacity, enabling them to receive and administer a greater variety of vaccines.

Countries must continue to account for and be vigilant of uncertainties, especially those related to the emergence and spread of variants of concern and the effectiveness and duration of protection provided by different vaccines. The Region has reported all four SARS-CoV-2 variants of concern. Most countries in the Region have reported the presence of the Alpha and Delta variants, whereas the Beta variant has been reported in six countries. The Gamma variant has been reported in India and Thailand, where it has been detected among travelers at entry points. Research on the effectiveness of COVID-19 vaccines against variants of concern is ongoing. Current knowledge indicates that available vaccines are effective against existing variants and continue to reduce mortality, the severity of disease, and transmission. National vaccination programmes must continue to demonstrate resilience, adjusting to evolving needs as more information on the virus and vaccines becomes available.

The COVID-19 pandemic has had vast and devastating economic impacts. In 2020, the global economy was estimated to have contracted by more than three per cent. Estimates show that countries in South Asia experienced an average economic contraction of 5.4 per cent, with extreme poverty impacting an additional 48–59 million people. Income inequality in the Region, which before the pandemic was high, is likely to be exacerbated. In this context, mass vaccination must be considered a source of economic stimulus, and must be provided sufficient and sustainable financing. At the same time, countries have a unique opportunity to invest in underfunded health systems that can withstand future crises. According to the International Monetary Fund, investing in vaccines globally could bring a benefit of about 9 trillion US dollars, while the costs are estimated to be only 50 billion US dollars. This represents an extremely high return on investment.

Increased global buy-in to the ACT-Accelerator is essential. The ACT-Accelerator is the world's most comprehensive end-to-end framework for collaboration to end the acute phase of the pandemic. Ensuring access for all to high-quality diagnostics and therapeutics remains a priority, as does the evidence-based implementation of public health and social measures. Vaccination is a major tool, but it is not the only tool. We must continue to act on the 3Ws—wear a mask, wash your hands and watch your distance. And we must continue to avoid the 3Cs—crowded places, close-contact settings, and confined and enclosed spaces. Relaxation of public health interventions should be done cautiously and with careful attention to those who remain unvaccinated.

For many months to come, the pandemic will continue to threaten lives and livelihoods across the South-East Asia Region, as across the world. We must do all we can to protect both. WHO will continue to support the Member States and partners in the Region and across the world to increase access to safe and effective vaccines, accelerate vaccine roll-outs, and utilise all tools at our disposal to control spread, save lives, and minimise impact. It is only through solidarity and sustaining region-wide resolve that we can drive infection down, prepare for and prevent new waves, and bring evidence-based treatments, technologies, and vaccines to all who need them. ■

**Note:**  
WHO South-East Asia Region covers 11 countries including three ASEAN Member States as follows: Indonesia, Myanmar, and Thailand.



**Increased global buy-in to the ACT-Accelerator is essential. The ACT-Accelerator is the world's most comprehensive end-to-end framework for collaboration to end the acute phase of the pandemic.**





# Conversations

## Vaccine Diaries

**Michelle Dian Lestari**  
Jakarta, Indonesia

I have an autoimmune disease. I suffer from hyperthyroidism, rheumatic arthritis, psoriasis-arthritis, vasculitis and fibromyalgia. I'm taking weekly immunosuppressant drugs, so that's why I was excluded from the list of people eligible to receive the vaccine when it was first opened for people under 50, sometime in March.

I did a lot of internet research until I found several that stated mRNA vaccines are the most suitable for people like me. Thus, Pfizer, Moderna or AstraZeneca are the options. At that time, again, only Sinovac was available, and I could not take that because it poses a great risk for me, either getting infected or having my immune system go haywire.

I've had only one AstraZeneca jab before I tested positive, and that helped a lot. My husband and I are living proof of how vaccines work.

My symptoms were relatively mild, only fever, headache, inability to breathe when in a prone position, digestive problems, general lethargy, and elevated D-Rimer. My thorax X-ray showed two spots only. I had homecare service from Evasari Hospital because all the hospitals were overcrowded, and I would never survive in a hospital (laughs).

My husband has an aneurysm in his descending aorta. He has arrhythmia, high cholesterol, and he is not in very good shape. He had two Sinovac jabs, but due to his condition, he was hospitalised to be safe but I stayed home. My husband was pretty sick. His oxygen saturation levels dropped to 89 per cent and he needed to have oxygen. The doctor said that if he did not have those Sinovac shots, his lungs would have been worse, filled with even more fluid.

My husband recovered after two weeks. It took me three weeks to get a negative result,

**The ASEAN asked readers across the region and those living overseas to share their personal vaccination stories. Here are a few that capture our readers' motivations and experiences.**

but I'm recovering until now. I suffer from long-COVID, gastrointestinal problems, and an elevated risk of blood clotting, but everything is under control.

From June to August, I lost approximately 10 people, whom I knew, to COVID-19. All of them were not vaccinated. One was actually pregnant, but her baby survived (7 weeks early). She could not get vaccinated because she was pregnant. In fact, most of those people could not get vaccinated due to ignorance and lack of knowledge.

A friend of mine, who also suffered from the same autoimmune problems, got COVID-19 as well. I helped her get into the hospital for treatment, but she didn't make it. She expired after 15 days, five of those days she was in the intensive care unit (ICU). She was not vaccinated because she was afraid of the risks. My friend's father, 59 years old, very healthy, was discharged from the hospital after his symptoms cleared, even though he was still positive. Three days later, his oxygen level dropped to 75 per cent, and he expired after two days in the ICU. He refused vaccination because he believed this was just like the flu.

I shared my story on Facebook because I wanted people to know that the "pains" you suffer after vaccination are nothing compared to the pain you have to endure when you are positive. My mother in law was asymptomatic because she was fully vaccinated. My business partner and his mother were asymptomatic because they were fully vaccinated.

Those sore arms, headache, chills, and fevers are nothing compared to death.

Sadly, Indonesia is a vast country with tough geography, so vaccine distribution is not as good as in big cities. I know several areas where the local governments were not doing their best to distribute vaccines to remote areas. However, I also notice that the highest positive rates are in big cities,

not small towns and villages, and people's movement is the biggest infection risk. What the government is doing now, making mini vaccination stations in bus and train terminals and airports, to provide vaccinations for people wanting to travel but haven't been vaccinated yet, is already good. I just wish the local health agencies in areas start cooperating with other entities (schools, businesses, etc.) to provide mass vaccination stations.

I have two daughters. The elder one is 13 and already vaccinated. She is an athlete and being home-schooled. The younger one is 11, and she will be vaccinated once it is available for her. She has agreed to postpone face-to-face learning until next year and allow options to stay at home if you prefer. I may not let her do face-to-face learning if the situation is still like this and she's not fully vaccinated. There are already incidents of school clusters because the teachers, the parents, the students or school workers do not practice strict health measures. I don't want to risk that for my kids.

I would consider a boost once it is available for the public. If it is not yet available, I will wait until it is time and it is available. People who are not yet vaccinated should be prioritised over those who have it but just need boosters. Maybe if I happen to go overseas and manage to get a booster, I will take it. If not, I'll wait until it is available.



Michelle Dian Lestari

**Badi Lattif**

Bandar Seri Begawan, Brunei Darussalam

For 457 days, Brunei held its ground as the last COVID-free nation in Southeast Asia and its residents had the unique luxury of enjoying life as normal in the middle of a global pandemic. However as the region quickly grew into the new epicenter of the Delta variant, the second wave of infections emerged in early August and the country continues to be in partial lockdown until 4 October 2021.

As an employee of Royal Brunei Airlines, I was among the first in the sultanate to receive my vaccine (back in April). As per the national COVID-19 Vaccine Distribution Strategy, we were grouped under the Phase 1 category of frontliners, senior citizens and students studying abroad. The company made this compulsory for all staff and I believe this was the right move to build up the first levels of herd immunity. Bruneians are able to book their vaccination slots via the BruHealth app on their smartphone.

To put simply, my vaccination experience was efficient and commendable. My slot was booked in advance at Brunei Indoor Stadium, and the whole process took only about half an hour. I applaud the Ministry of Health for doing a spectacular job. I didn't experience any side effects for my first dose. However, I fell sick and was bed-ridden with flu-like symptoms for about a good week after receiving my second dose the following month.

I would like to express my endless appreciation to all frontliners, volunteers, our Ministry of Health and the Government of His Majesty The Sultan and Yang Di-Pertuan of Brunei Darussalam in their fight against this global pandemic. Now that I'm vaccinated, I hope others in Brunei will partake in their collective duty in obeying SOPs and work towards a fully vaccinated nation to save lives.

**Basir Zahrom**

Kuala Lumpur, Malaysia

I have been fully vaccinated. What motivated me to take the vaccine was the desire to live as it was before COVID-19 struck free from restrictions across state districts, can eat in restaurants, play sports, children can go to school, and I can work as usual. All that will be a reality when the group immunity target of 80 per cent is achieved in Malaysia.

I did not hesitate to get the vaccine because the government has provided enough information through the Ministry of Health on the type of vaccine and why people need to take the vaccine. However, anti-vaccine groups refuse to be vaccinated because they believe in too many conspiracy theories spread on the internet.

I got vaccinated at the World Trade Center (WTC) Vaccination Center, Kuala Lumpur, and everything went smoothly. The first time, around early June, took quite a long time as many had not received their first dose yet. The whole process took about over an hour. I took the second dose in early August, and it was only about 30 minutes because everything was already in order.

The journey to the WTC went smoothly because I only had to prove that I wanted to go to the Vaccine Center through the MySejahtera application on my mobile phone. Upon arrival, I hoped to meet people dressed strangely like ghosts or superheroes but didn't find any. Instead, there was a woman holding a sanitiser spray gun who sprayed all the places

she occupied, until an officer asked to be sprayed on the whole body before serving the woman.

After the vaccination, the "mandatory" event here is to take pictures in the photo booth provided to be uploaded on their respective social media. The aim is to promote the importance of taking vaccines and further raise awareness among the community. Citizens who have completed two doses are now allowed to eat at restaurants and do light leisure activities according to the SOP provided and provided they show the e-certificate available in MySejahtera.

**Narisara Bahalayothin**

Bangkok, Thailand

When the vaccination rollout started, I didn't hesitate at all to get vaccinated. My motivation is to minimise risk and lower the chance of severe symptoms. I got my jabs in a hospital. Apart from hospitals, we also have vaccination centres around Bangkok, like in malls, train stations, etc.



Basir Zahrom



Badi Lattif



Narisara Bahalayothin

**Clara Wai**  
Myanmar

Initially, my family and I hesitated to get the vaccine because of the situation in Myanmar, but we decided to get vaccinated so that we could get better protection from the COVID-19. My father has been vaccinated, and I am getting my vaccination too in September. With the current situation, it is hard to get access to healthcare if you get sick, and oxygens are quite scarce too. People are dying as they isolate themselves at home with little medical care. I also lost my aunt and uncle due to COVID-19.

The vaccines available in Myanmar are Sinopharm and Covishield, but they are quite hard to get, especially in rural areas. For the elderly, they can get vaccinated for free but others would have to source their own vaccine and pay for it. There are a few private vaccination drives with limited slots but we have to pay 60,000 Myanmar kyat (about 34 US dollars) for the vaccines. I had to register for it under the name of an organisation as they were accepting only 250 applicants when I applied. The

price is quite expensive and not everyone can afford it. I think vaccines should be freely available for everyone.

My mom and I received the first dose on 10 September 2021 at Pun Hlaing Vaccination Center. Those vaccines are available for 250 people. The place is clean and all the staff and doctors wear masks, face shields, and PPEs. There are three areas: registration, health check-ups, where they check your blood pressure and oxygen level, and the vaccination area.

On the first day, I received the vaccine shot on my left arm and could feel the pain right away. I also got a headache. All the pain was gone, along with the dizziness on the second day.

Currently, people in Myanmar are afraid that the internet connection will be cut down, so first, we need to have the technology to stay connected and assurance that the communication line will remain open. I think people in rural areas need hygiene products and clean water.

I hope that everyone can get vaccinated soon so that schools and businesses can reopen again. Schools and universities here have been closed for more than a year due to the pandemic. I am starting my master's too later this year, so hopefully, I can have face-to-face learning too by then.

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**Charmaine Joy V. Escueta**  
Manila, Philippines

What motivated me to get vaccinated was my fear of getting sick. I heard of colleagues and family friends who got sick with COVID-19 and did not recover. I knew that getting vaccinated was the best course of action but I did hesitate initially because of the available brands of vaccines in my country. I wanted to get vaccinated with Pfizer, Moderna or AstraZeneca but what was

widely available at that time was Sinovac so it was the vaccine that my family and I ended up with.

I didn't need persuading. I did my homework about the vaccines that were being developed. I watched and read a lot of news from reliable sources like CNN and MSNBC. I also visited *The Washington Post*, *Economist*, WHO, and CDC websites. I watched medical webinars discussing new research on COVID-19 and the vaccines in development at that time. My parents were a bit apprehensive about getting vaccinated because of their age and comorbidities, but I explained the benefits of getting the vaccine. I was able to convince them to take it in the end.

I registered for vaccination at the local government unit where my office is located and was happy to get a slot not long after. The online registration was fairly easy too. The queue was very systematic at the vaccine site and it took me around 30 minutes to complete the entire process, i.e. verification of my appointment, screening with a doctor, getting the shot, and monitoring.

Because of the scarcity of vaccines, the initial vaccination drive in my community was at a snail's pace. Health workers and seniors were prioritised and then eventually people with comorbidities were included in the priority sectors too. As of today, they have expanded it to the rest of the community, except for children. But with the limited supply of vaccines, we still have a long way to go from hitting the target.

Initially, I was relieved to have been vaccinated. But with the new variants of COVID-19 like Delta, the efficacy of the vaccines is now a cause for worry. In other countries, there are talks of booster shots, but here in the Philippines, the majority of people have not even gotten their first dose. So the initial confidence I had from getting vaccinated is now gone.



Clara Wai



Charmaine Joy V. Escueta



**Nguyen Bich Ngoc**  
Hanoi, Viet Nam

My family and I have always been huge vaccine supporters since day one. Therefore, it did not take us long to submit our self-registration for the COVID-19 vaccine.

After a few months of waiting, my mom and I finally got our first dose of AstraZeneca on 13 August. It was the first time in over a month that I had a reason to dress up and step out of my house as Hanoi, where I live, has been under lockdown since the emergence of the 4th COVID-19 wave. Everything went smoothly, and I came home not experiencing any side effects for the rest of the day. The next morning (which is 24 hours after my shot), I only felt a bit tired, followed by arm soreness and a mild headache that lasted for about one day. All those post-vaccination symptoms cleared up completely after two days, so it could be said that my vaccination experience was quite a pleasing one.

My dad and my younger sister, on the other hand, had decided to sign up as volunteers in two indigenous vaccine trial programs with the hope of contributing to the development of Viet Nam's homegrown COVID-19 vaccines.

Now that I am partially vaccinated, I have to admit that this gives me a mixed feeling rather than a pure sense of relief. I do feel truly lucky and grateful to have gotten the jab, but I am also feeling insecure and anxious at the same time. My country is still struggling

to secure enough doses to satisfy citizen's needs while the number of cases has been continuously increasing in recent months. My only hope and wish is that the government will be able to accelerate the vaccine rollout so that the COVID-19 situation will get better soon and life can get back to normal.

**Kyay Mon**  
From Myanmar, residing in Japan

I recently got my second shot of the Moderna vaccine in Osaka, Japan, where I've been working. I felt a bit worried because many people seem to develop a high fever after the second dose. As it turns out, I didn't experience any serious side effects, apart from a slight headache, soreness in the arm, and a low-grade fever for a few days. Using an ice-pack to reduce arm pain, taking time to rest and drinking lots of water helped!

I tried to get a vaccination appointment as soon as I became eligible to apply around July. I was planning to relocate to Europe in September for my further studies, and I wanted to be fully vaccinated so that it would be safer to travel.

In the beginning, getting an appointment via the online system was challenging. The slots were quite limited and they got filled up in a few minutes. But gradually, more vaccination centres started to operate on a larger scale, and after two weeks of trying without success, I managed to get a booking at a Japanese Self-Defense Forces vaccination centre. The actual vaccination process was very well-organised, hassle-free and quick!

While I feel more relieved now that I got vaccinated, I am sad to see that a lot of people in my home country, Myanmar, cannot get vaccinated even if they want to. Political unrest has crippled the health system, economy and livelihoods of millions of people. My heart goes out to everyone back home who have lost their loved ones to COVID-19. Many lives could

have been saved if they had access to vaccines and proper healthcare.

I hope that in the future, we as a global community can work together to reduce such inequalities among countries and people that were exacerbated by the pandemic.

**Anindya Pradipta**  
Indonesian residing in Japan

I am currently working in Japan. Many companies in Japan provide vaccination for their employees. Luckily, my company is one of them. Since this vaccination program is run by the company, I just registered and did not queue for vaccination.

What I heard from people who will get vaccinated through the city hall is that they are struggling to get a reservation, especially young people. The Japanese government prioritises the elderly to get vaccinated first because of Japan's inverted pyramid (the number of elderly outnumbering young people).

Two reasons motivated me to get vaccinated. The first is for me. Based on many research studies, we all know from evidence that once we get vaccinated, our antibodies will strongly respond to COVID-19 infection. Even if we are infected, the level of illness will be much reduced, and the risk of having severe problems can be prevented. The second is for the community. If the number of vaccinated people increases, it means the number of infections will gradually decrease. When the rate of infection decreases, we can start enjoying our activities with other people with less risk!

Of course, I feel much safer now that I'm vaccinated. However, I keep my "new normal" behaviour by always wearing a mask in public spaces, keeping my distance from people, avoiding public transportation during rush hour, not sharing food/drinks from the same container, and washing my hands frequently. ■



Nguyen Bich Ngoc



# Addressing the Changing Pandemic Environment to Protect the Health and Wellbeing of Children

**MYO-ZIN NYUNT**

UNICEF DEPUTY REGIONAL DIRECTOR FOR EAST ASIA AND THE PACIFIC

**COVID-19 continues to threaten people's lives in every aspect, in all corners of the world, with children most impacted. In East Asia and the Pacific, the latest wave of the pandemic rages on while changes dominate the landscape.**

**N**ew variants, vaccines, and policies are sweeping through countries as quickly as the virus itself, leaving governments and partners to tackle the virus with great uncertainty. At the centre of these challenges lie complex questions about how best to assure the health and wellbeing of children.

In countries across ASEAN, communities and families are confronted with the possibility that the COVID-19 pandemic is here to stay. This realisation, combined with the economic and social toll that the pandemic has already taken, has contributed to a sense of fatigue. "Pandemic fatigue"—a state of being demotivated or worn out by precautions and restrictions—can be responsible for an increase in cases as people abandon protective behaviours. *Thus, now more than ever, ASEAN Member States need to focus attention on developing strategies that reinvigorate public support to prevent the spread of COVID-19.*

## **Careful Priority Setting for Equitable COVID-19 Vaccination**

Vaccination and protective measures continue to be the foundation for fighting the pandemic. The science is clear—COVID-19





**In an environment of low vaccine supply, one of the most important ways to protect the health and development of children is to make sure that the people who care for and spend time with them—caregivers and teachers—are fully vaccinated.**

vaccines are safe and effective at reducing the risk of infection, severe disease and death, including from the Delta variant. Cases are on the rise across the region, with more people shifting their view of COVID-19 vaccination from one of hesitancy to one of acceptance.

Although many new COVID-19 vaccines are being approved, supplies remain limited.

Despite strong efforts on the part of the COVAX Facility, bilateral donors, and governments' own procurement,

the demand for vaccines is beginning to outpace supply, creating inequities in vaccine distribution across many countries. The most vulnerable groups—the elderly, disabled, those with underlying health problems—face the greatest risk for severe disease and death from COVID-19, yet are often unable to access vaccination. Inequitable access to vaccines is also being noted among women, the rural and hard to reach areas, and displaced populations in crisis. *With the prevalence of access and supply issues, careful planning and priority setting are*

*critical to bringing about greater equity in COVID-19 vaccination.*

### **Vaccinate Caregivers and Teachers and Use Protective Measures Where Children Live, Learn and Play**

Equally important, however, is that these strategies strike a balance between protecting the health of the population and the physical, psychosocial, and educational wellbeing of children and adolescents. In an environment of low vaccine supply, one of the most important ways to protect the health and development of children is to make sure that the people who care for and spend time with them—caregivers and teachers—are fully vaccinated. *Teachers need to be vaccinated for their own protection as frontline workers in the education sector, and in turn, to protect access and quality of education.*

Using protective measures in the spaces where children live, learn and play, provides additional protection, including wearing a mask, social distancing, and hand washing. Enabling these safe environments for children and adolescents should also be a priority for countries.

### **Support Health Workers with the Latest Information**

Health workers—and the health systems in which they work—continue to be overwhelmed by the pandemic and the changing environment of available vaccines. Health workers remain on the frontlines of the pandemic and are a critical link between the health system and community. They are faced with the dual responsibility of conducting their usual duties while being prepared to fulfil COVID-19 related work at a moment's notice.

*As a trusted source of information in the ASEAN Member States, health workers deserve our respect, support, and access to the newest information. Through both traditional and*



In its efforts to protect children's health and well-being, Cambodia has prioritised vaccinating their caregivers and teachers. Cambodia is in fact one of the first 17 countries globally to prioritised the vaccination of teachers, after UNICEF advocated for this measure as a powerful step towards restoring education for Cambodia's children. UNICEF has been working closely with Royal Government of Cambodia and WHO to support every stage of the vaccine programme including planning and coordination, cold chain management, and risk communication and advocacy.





digital technology, continuing education systems must be in place for health workers to receive timely, updated information as new variants arise and vaccines become available.

### **The Pandemic's Impact on Health and Education—Helping the Most Vulnerable**

New waves of the pandemic are also bringing about unpredictable access to essential health services for children. Lockdowns and fears of being exposed to COVID-19 at health facilities further contribute to reduced health-seeking among the community for routine maternal and child health services. We are starting to see the consequences with a decline across the region of routine childhood immunisations (such as vaccines to prevent measles and polio). With even greater reductions in routine immunisation expected in the coming months, *ASEAN Member States are likely to see increases in severe illness and deaths among children from vaccine-preventable diseases. Now is the time to create new opportunities to reach children with catch up vaccines and other essential health services.*

The ongoing pandemic is leading to profound changes to health care and education systems, causing substantial losses and inequalities in learning.

The number of children not meeting a minimum level of learning is on the rise in ASEAN countries. School closures have impacted both academic attainment and social and emotional wellbeing. While schools have created options for distance learning, children struggle to access resources and support, particularly those from the most disadvantaged households.

### **Reopening Schools, Making Sure Children Have Access to In-Person Learning**

While the loss in learning and consequences for future earning potential is staggering, children are losing out on far more than education. Schools often play an important role in children's access to health and social services, nutrition, protection, and psychosocial support. School closures have contributed to increases in mental health issues among children, adolescents and caregivers, increased exposure of children to violence and exploitation at home and online, loss of support services for children with disabilities and special learning needs, and for many boys and girls, reduced chance of a return to school once the doors reopen.

Given what is at stake, the case could not be stronger for reopening schools with appropriate protective health measures and putting in place

targeted measures to help children recover the learning they lost, with particular attention to the most vulnerable children.

As this region braces for a period of ongoing waves of the pandemic, an opportunity presents itself now for the ASEAN Member States to show their leadership and put strategies and plans in place that will place the priority on vaccine equity and continue to build public support to prevent the spread of COVID-19. UNICEF looks forward to working together with ASEAN Member States to put in place measures to protect children, their health and their development. We must ensure that essential health services, such as routine immunisation programmes, continue and schools will reopen as soon and as safe as possible. We must work together to make up for the lost time and ensure that the children growing up in the pandemic get equal opportunities to grow, learn, and pursue their dreams and aspirations, just as we did. ■



# EU and ASEAN—Working Together to Ensure that No One is Left Behind

**Igor Driesmans**

EU AMBASSADOR TO ASEAN



**Ambassador Igor Driesmans discusses the goals and components of the ASEAN-EU cooperation on COVID-19 response, and explains the ongoing efforts of EU to increase ASEAN Member States' access to safe and effective vaccines.**

**W**hen reflecting on 2020 in an editorial that I wrote in late January 2021, I called it a dreadful year. The reasons for this classification have been, sadly and tragically, all too relatable to each one of us—the start of the COVID-19 epidemic and its speedy growth to a pandemic of

truly global unprecedented proportions; the death toll it has inflicted since and the livelihoods it has severely impacted and even shattered; the loss of activities that we used to take for granted; the overwhelming sense of uncertainty and unpredictability that has become a major feature of our lives.

I also wrote of another story that was unfolding against this sombre backdrop—that of scientific innovation, ingenuity, and heroic effort of vaccine development and trials, of the hope these brought to us, and of the promise of these vaccines providing a major boost to our collective effort to stem the tide of the pandemic. The key messages were clear and remain as valid now as they were then: “no one is safe until everyone is safe” and “only global cooperation will bring vaccination for all.”

I am proud to add that these principles have guided our actions from the very beginning—not only those of the EU and our 27 Member States, not only those of ASEAN and its 10 Member States but also the long-standing cooperation between us, two leading regional organisations and strategic partners. What has this close cooperation since the start of the COVID-19 pandemic entailed? A number of concrete examples and highlights come to mind—firstly, our assistance with mitigating the effects of the crisis; secondly, our stalwart support for vaccine multilateralism; and thirdly, our experts’ collaboration.

The first step came shortly after the outset of the pandemic. On 20 March 2020, a mere nine days after the WHO declared the COVID-19 outbreak as a pandemic, EU and ASEAN Foreign Ministers convened via a videoconference to mitigate the social and economic impact of the crisis on both regions, to ensure that supply chains remained open and crucial movement of goods unhampered, and to provide support to relevant scientific research.

Four months later, the EU and our Member States, in a joint Team Europe effort, followed up by mobilising over 800 million euros to support the fight against COVID-19 in the ASEAN region. The focus of this package was multifaceted, including addressing the immediate health crisis, mitigating the socio-economic approach of the





pandemic, and increasing the resilience of Southeast Asia's health, water, and sanitary systems. The number of resources mobilised by Team Europe was greater than that of any other ASEAN dialogue or strategic partner.

This amount was topped up by a 20 million euros support programme on "South East Asia Health Pandemic Response and Preparedness," jointly launched by ASEAN Secretary-General Dato Lim Jock Hoi and EU High Representative for Foreign Affairs and Security Policy/Vice-President of the European Commission Josep Borrell during the latter's visit to Jakarta in early June 2021. The programme, which the WHO will implement, will strengthen regional coordination to respond to the immediate emergency and also the overall capacity of health systems in Southeast Asia for long-term resilience. Its activities are catered to individual nations' priorities, ranging from maternity care and mental health services to fortifying health systems for displaced and indigenous populations.

The second important pillar of our joint response has been our unequivocal and unwavering interest in pursuing a multilateral approach to affordable, fair and equitable access to safe and effective COVID-19 vaccines. In mid-2020, the European Commission announced the intention to provide the first 400 million euros in guarantees to the COVID-19 Vaccine Global Access Facility (COVAX). The COVAX Facility is up and running one year later, and Team Europe's contribution already amounts to more than 3 billion euros. With COVAX, our goal is clear: to provide safe and effective COVID-19 vaccines fairly and equitably to 92 lower and middle-income countries, as part of a collective effort to secure two billion vaccine doses by the end of 2021, covering more than 20 per cent of their population and doing so without any conditionality, with no strings attached and without any demands for political favours. We stand for vaccine multilateralism and resolutely oppose vaccine nationalism—something that we have shown time and time again in words and deeds alike.

What has this meant for Southeast Asia? First vaccine deliveries under COVAX commenced in the region in early March, allowing participating countries to accelerate their efforts to vaccinate frontline workers and the most vulnerable parts of their populations. To cite a few statistics—Indonesia has already received 100 per cent of its COVAX allocation, which translates to 11,704,800 doses of the AstraZeneca vaccines; the Philippines, 4,584,000 doses; Viet Nam, 2,493,600 doses; Cambodia, 324,000 doses; and Lao PDR, 232,620 doses. As more and more vaccine donations keep being announced, it is my hope that as you are reading this article, the actual figures are already higher and much closer to the overall initial allocation for ASEAN, which stands at 29,954,430 doses.

In addition to supporting international solidarity efforts through COVAX, the EU has consistently maintained export openness. Defying false and misguided accusations of vaccine hoarding, we have exported around 600 million doses of COVID-19 vaccines—in other words, half of our entire production—to more than 90 countries, including 11.8 million doses for export to Singapore and 10.4 million doses to Malaysia. This means that for each dose made in the EU and shipped to an EU Member State, one dose is exported. Far from being a vaccine hoarder, the EU, in fact, has been the biggest global provider of COVID-19 vaccines and thus, has been leading by example.

The last strand of our vaccine outreach consists of vaccine donations. At the European Council held at the end of May, Leaders committed to donating over 100 million doses by the end of 2021. As of late July, Team Europe that consists of the EU, our institutions, and all 27 Member States is on track to exceed this initial goal, with 200 million doses of COVID-19 vaccines foreseen to be shared with the countries that need them most, by the end of this year.

Discussions among experts have served as the third pillar of our close collaboration

and have enabled us to exchange first-hand knowledge and experience fighting the pandemic. The 1st EU-ASEAN Experts' Dialogue on COVID-19 Vaccines took place on 8 December 2020 and provided a platform for debating strategies and practical aspects of vaccine authorisation, production, and distribution. The 2nd Expert Dialogue followed on 25 May 2021 and addressed the emergence of new variants, the scaling up of manufacturing capacity, and the possibilities and challenges of vaccine rollout. Each Dialogue was attended by over 100 policy practitioners, medical experts, and industry representatives. Looking ahead, we want to continue in these exchanges and make them as timely and useful as possible, with the 3rd Dialogue envisaged for this autumn.

In this context, let me also mention the EU-ASEAN webinar dedicated to High-Performance Computing (HPC) COVID-19-related modelling and diagnostic held on 10 July 2020, which was followed up by an HPC school over five days in July 2021 to learn about the fundamentals of HPC design and applications to critical domains such as COVID-19.

Over the past few weeks, the highly contagious Delta variant has unleashed the most devastating wave of infections in Southeast Asia yet, while Europe is also experiencing the steepest growth in the number of cases since the start of the pandemic. We may still be far from understanding the true nature of the virus and being able to predict where it takes us next, but the launch of vaccination programmes in Europe, Southeast Asia, and worldwide has provided us with irrefutable evidence about the effect of vaccines. In a sentence, vaccines significantly decrease the rate of hospitalisations and therefore save lives and relieve healthcare professionals and other frontline workers to whom we owe so much.

Looking ahead, I am certain that the EU and ASEAN, as long-standing friends and strategic partners, will continue to work closely together in order to ensure that no one is left behind in our effort to beat the virus in the region and across the globe. Let us work together to ensure that 2021 will be remembered as the year when the tide finally turned! ■



# Vaccine Security and Self-Reliance

Several ASEAN Member States are developing homegrown COVID-19 vaccines to build production capacity and vaccine stockpiles. Others have partnered with global manufacturers to secure vaccine supplies for the region. These are some of the region's COVID-19 vaccine candidates.

Country	Vaccine Name	Developing Institution	Technology	Progress
Indonesia	Merah Putih vaccine	Biotics Pharmaceutical and Airlangga University	Inactivated virus	Pre-clinical stage
	Merah Putih vaccine	Eijkman Institute and Bio Farma	Recombinant protein	Exploratory stage
	Merah Putih vaccine	Institut Teknologi Bandung	Vector adenovirus	Exploratory stage
	Merah Putih vaccine	Indonesian Institute of Science (LIPI)	Recombinant protein	Exploratory stage
	Merah Putih vaccine	Gajah Mada University	Recombinant protein	Exploratory stage
	Merah Putih vaccine	Padjajaran University	Recombinant protein	Exploratory stage
	Merah Putih vaccine	University of Indonesia and Etana Biotechnologies	DNA, RNA, and virus-like particles	Exploratory stage
Malaysia	Unnamed	Malaysian Institute for Medical Research and Universiti Putra Malaysia	RNA-based vaccine	Pre-clinical stage
Singapore	Arct-021	Singapore's Duke-NUS Medical School and Arcturus Therapeutics	RNA-based vaccine	2nd phase of clinical trials
Thailand	ChulaCov19	Chulalongkorn University	RNA-based vaccine	2nd phase of clinical trials
	HXP-GPOvac	Faculty of Tropical Medicine at Mahidol University and the Government Pharmaceutical Organization	Inactivated vaccine	1st phase of clinical trials
	Unnamed	Chulalongkorn University/The Government Pharmaceutical Organization (GPO)	Protein subunit	Pre-clinical stage
	Unnamed	Mahidol University/The Government Pharmaceutical Organization (GPO)/Siriraj Hospital	Virus like particle	Pre-clinical stage
	COVIGEN	Bionet Asia and Technovalia	DNA based vaccine	1st phase of clinical trials
Viet Nam	Nanocovax	Nanogen Pharmaceutical Biotechnology	Protein subunit	3rd phase of clinical trials
	Unnamed	Vabiotech and University of Bristol	Protein subunit	Pre-clinical stage
	COVIVAC	Institute of Vaccines and Medical Biologicals	Viral vector (non-replicating)	Phase 1/2 of clinical trials



Sources: WHO, ASEAN BioDiaspora Regional Virtual Center, Indonesia Ministry of Health, Thailand Ministry of Health, reputable news sources



# COVID-19 Vaccines

## Designed and Made in Thailand

**KIATTIBHOOM VONGRACHIT, MD**  
PERMANENT SECRETARY  
MINISTRY OF PUBLIC HEALTH, THAILAND

**In mid-2020, Thailand planned its rollout plan to ensure the inoculation of 70 per cent of our adult population by the end of 2021, using millions of doses of locally produced AstraZeneca's vaccine, together with imported vaccines procured through bilateral deals.**

Our National Communicable Diseases Committee established a sub-committee to oversee vaccine management, knowledge communication and public relations, vaccination service, evaluation and follow-up, and adverse events following vaccination. The vaccines were distributed first to highly affected areas and subsequently across the country.

The rollout of COVID-19 vaccines is critical to protecting lives, building human capital, and stimulating economic recovery. All stakeholders must work together to accelerate vaccine production and equitable distribution to boost economic recovery. An equitable access principle underpins our rollout plan. Both Thai citizens and non-Thai nationals can access COVID-19 vaccines. As the vaccine supply was limited, our first batches of vaccines in February 2021 were prioritised for our front-line health workers and public health volunteers, the elderly aged 60 and over, people with severe chronic diseases, and pregnant women with over 12 weeks of gestation. The general public and foreigners were vaccinated in subsequent months as more vaccines became available from bilateral deals. The Ministry of Public Health also works closely with the Ministry of Foreign Affairs in reaching out to, initially, foreigners aged 60 years or more and for those with chronic illness. Since June this year, more than 170,000 foreigners of 173 nationalities in Thailand have been vaccinated through a pre-registration system. We have also worked with various partners, such as Thailand's National Vaccine Institute (NVI) and the Thai Health Promotion Foundation, to provide the public with accurate knowledge about the benefits of vaccines and address any fake news to lower vaccine hesitancy.

We have been working towards homegrown vaccines to ensure vaccine security and self-reliance for decades now. The critical need



Photo Credit: © Ministry of Public Health, Thailand

for COVID-19 vaccines has strongly affirmed our self-reliance policy and financial support for boosting national vaccine capacity. The global vaccine supply is limited, with worldwide demand exceeding the global vaccine production capacity. Our capacity for developing and producing COVID-19 vaccines remains limited. We are striving to enhance the capacity through cooperation among potential vaccine research institutes and manufacturers in the country and collaboration with international partners to transfer technology to local vaccine developers and manufacturers and scale up their production base capacity. In 2020-2021, the Thai government financially supported local research institutes and vaccine manufacturers in developing COVID-19 vaccines, using different technology platforms, and upgrading vaccine production capacity.

Producing homegrown vaccines would mean that we can set our own direction. The ASEAN Vaccine Security and Self-Reliance (AVSSR), under the endorsement of Heads of States at the 35th ASEAN Summit in 2019, is a potential platform to galvanise ASEAN collaboration towards regional security and self-reliance for COVID-19 vaccine supply. This will help us cope with the current pandemic which could be protracted and with other future emerging infectious diseases (EID) threats. We are living in an uncertain era. Therefore, ASEAN needs to be self-reliant in vaccines. The current pandemic is a driving force to accelerate this initiative towards achieving vaccine security and self-reliance in ASEAN.

The key words are collaboration and shared vision. We have created a joint operation among researchers, manufacturers, and regulatory agencies to brainstorm ideas comprehensively and collectively for design, research, development, production, problem solving, and exchange of experiences. Our Team Thailand allows researchers to integrate their work successfully. Whether it is developing prototypes in the country or getting technology transferred from other countries, integration will result in standardised, safe and effective vaccine research, development and production

according to international standards. NVI plays a significant role in enhancing existing capacity and infrastructure for local partners through governance arrangements and financing a critical budget for Team Thailand. We have a few types of vaccines under development and have started human trials for our domestically developed coronavirus vaccines.

A few of our highly recognised partners include, but are not limited to, Government Pharmaceutical Organisation (GPO), Chulalongkorn University, BioNet-Asia Co., Ltd., and Baiya Phytopharm Co., Ltd. GPO has been working with Mahidol University's Tropical Medicine Department and an American non-profit organisation to develop a vaccine candidate. They are studying and creating a COVID-19 vaccine by combining the genetic material of the spike protein with Newcastle disease virus (NDV), utilising egg cell-based technology to generate an *inactivated vaccine*. Phase two started in July and we expect the results by year-end. The vaccine manufacturing capacity of GPO can be expanded up to 30 million doses per year, so we hope for its success. Another homegrown vaccine being developed by Chulalongkorn University and its partners is called "ChulaCov19" using *messenger RNA (mRNA) technology*. It uses the same technology platform as Pfizer-BioNTech and Moderna. ChulaCov19 is designed and developed by a team of Thai researchers working collaboratively with Pennsylvania University's Professor Drew Weissman—a physician-scientist renowned for his discovery of the technology used in the production of this vaccine. They use the tiny particles of the coronavirus' genetic material (mRNA) to tell cells to make specific viral proteins, such as the spike protein, to enter host cells and boost them to build immunity to combat the virus. The clinical trial began in June 2021 and will continue until the year-end. One good thing about this technology platform is that the mRNA type of vaccine can be manufactured rapidly as we do not need to wait for the virus to be cultured. Moreover, this technology platform can promptly customise the prototype vaccine based on the genetics of the mutant and be

transferred to local manufacturers for further vaccine production. As with the immense concern with the emerging variants, the ChulaCov19 vaccine will be designed and developed to be capable of preventing mutated and vaccine-resistant variants.

Another promising vaccine under development is a *DNA vaccine* being developed by BioNet-Asia Co., Ltd. They are currently preparing for clinical studies and expect to start the clinical studies phases 2 and 3 in 2021. The company has the capability to manufacture at a large scale very quickly. Interestingly, Baiya Phytopharm Co., Ltd., a start-up company of Chulalongkorn University from CU Innovation Hub, is now researching on utilising tobacco leaves as a protein expression platform to produce recombinant molecular proteins in vaccines. In mice, the vaccines are very successful in terms of both immunogenicity and safety. Currently, vaccine manufacturing is focused on increasing production capacity and improving production standards for clinical trials, which are scheduled to take place from August to September 2021. We expect to deploy these promising vaccines next year to have more freedom with our vaccine policy.

I have to say that all ASEAN Member States can help drive vaccine security and self-reliance. There are lessons we have learned from this pandemic. First, each country must increase investment in pandemic preparedness and response to mitigate its impacts and build back better. I consider it an essential investment because we will get a significant return. Second, we must unite and collaborate to achieve our shared goal of higher security of vaccine and therapeutics supply in the region for the health security of our people. Third, improved capacity and self-reliance in the development, production and supply of vaccines and therapeutics in our region, under regional collaboration on various appropriate platforms, will guarantee the availability of essential supplies in our fight against the COVID-19 pandemic and future EID threats. Lastly, public health and social measures are critical to preventing and limiting COVID-19 transmission. ASEAN can learn from these lessons. ■



# Vaccines Factsheet

1

## How was the first vaccine developed?

Edward Jenner, an 18th-century physician from Gloucestershire, England, observed that farmers exposed to cowpox, a mild cattle disease, did not perish from smallpox. He sought to verify this observation by deliberately infecting an eight-year old boy with cowpox—by smearing pus taken from a milkmaid's cowpox lesions into a cut he made on the boy's arm—and then exposing him to smallpox after six weeks and several more times thereafter. The procedure, which Jenner called vaccination after the Latin word for cow (vacca), was deemed successful when the boy did not develop smallpox, proving his immunity from the disease.

**Sources:** Gavi, the Vaccine Alliance <<https://www.gavi.org/vaccineswork/arriving-first-vaccine-abridged-history-vaccination-part-1>>; Science Museum <<https://www.sciencemuseum.org.uk/objects-and-stories/medicine/smallpox-and-story-vaccination>>; World Economic Forum <<https://www.weforum.org/agenda/2020/04/how-vaccines-changed-the-world/>>



Recent research, however, revealed that crude forms of inoculation were practiced in China and India as early as the 1500s. In China, there were accounts of “insufflation” in which powdered smallpox scabs were blown into or inhaled by an uninfected person to gain protection.

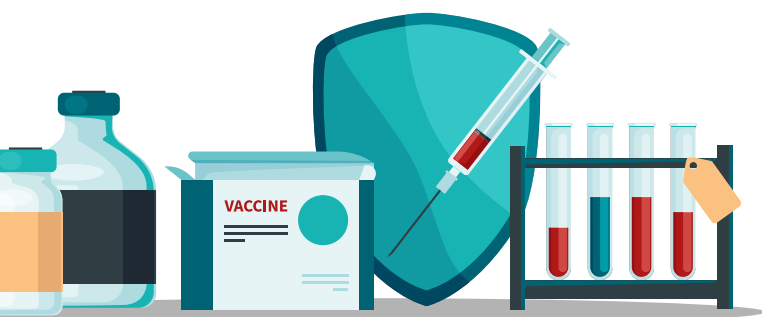
2

## How do vaccines protect humans from diseases?

A vaccine typically contains the inactivated or disabled form of a disease-causing organism that can trigger an immune response. This disease-causing organism is often referred to as a pathogen, which can either be a bacterium, virus, parasite, or fungus.

When introduced into the body through vaccination, the pathogen is recognised by the immune system as an invader and the immune system mounts its defense by producing antibodies that alert immune cells to destroy it. It also remembers the pathogen so that in case of future exposure, the immune system is trained to attack it before it can spread and cause illness. Vaccination usually keeps an individual protected against a disease for years or even a lifetime.

**Sources:** World Health Organization <[https://www.who.int/news-room/feature-stories/detail/how-do-vaccines-work?gclid=EAlaIqobChMlotXujlNX8gIUAWrCh1wrgyCEAAAYASAAEgKuovD\\_BwE](https://www.who.int/news-room/feature-stories/detail/how-do-vaccines-work?gclid=EAlaIqobChMlotXujlNX8gIUAWrCh1wrgyCEAAAYASAAEgKuovD_BwE)>; Science Museum <<https://www.sciencemuseum.org.uk/objects-and-stories/medicine/smallpox-and-story-vaccination>>



3

## How long does it take to develop and produce a vaccine?

To ensure that a vaccine is safe and effective, it goes through a long and rigorous process of research, development, and trial. It typically begins with basic research on the pathogen, including identification of the right antigen (component of the pathogen) that can trigger an immune response. Next is the preclinical testing of the candidate vaccine on human cell cultures or animals to collect data on how the host reacts to the vaccine, determine what adjustments need to be made, and decide whether the candidate vaccine is safe and effective enough to be tested in humans. The clinical trials involving humans are conducted in three phases, as follows:

- Phase 1: The candidate vaccine is administered to a small number of healthy, “uninfected” volunteers to verify its ability to generate immune response and to observe any adverse reactions.
- Phase 2: This involves a larger group of volunteers whose characteristics (e.g. age) resemble the target group for vaccination. This phase includes administering the candidate vaccine to one group and a placebo (or comparative vaccine) to a control group, in a randomised method, to compare whether disease incidence is lower among the vaccinated group.
- Phase 3: The trial is further expanded to cover thousands of volunteers from multiple sites (even multiple countries) to find out if the vaccine works in different populations.

After the clinical trials, the results are reviewed and approved by a regulatory agency. Manufacturing of the vaccine ensues

once the regulatory agency issues a license. Monitoring and surveillance of the approved vaccine's performance continue even after its commercial distribution.

The vaccine development process typically takes 10 to 15 years. For example, the first vaccine trials for polio began in the mid-1930s, but it was not until 1953 that a viable polio vaccine was developed and it was not until two years later that the same was approved for widespread use. The fastest vaccine developed—before the COVID-19 vaccines—was the mumps vaccine in the 1960s which took only four years.

**Sources:** World Health Organization <[https://www.who.int/news-room/feature-stories/detail/how-are-vaccines-developed?gclid=CjwKCAjwhOyJBhA4EiwAEcdcdxGtGjQ1gsnJmUR77ovVDMYVW70F-APMlpWlWlXinU5SG9z-4JoProCC3kQAvD\\_BwE](https://www.who.int/news-room/feature-stories/detail/how-are-vaccines-developed?gclid=CjwKCAjwhOyJBhA4EiwAEcdcdxGtGjQ1gsnJmUR77ovVDMYVW70F-APMlpWlWlXinU5SG9z-4JoProCC3kQAvD_BwE)>; Food and Drug Administration <<https://www.fda.gov/vaccines-blood-biologics/development-approval-process-cber/vaccine-development-101>>; Gavi <<https://www.gavi.org/vaccineswork/five-ways-scientists-are-ensuring-safety-covid-19-vaccines>>; Nature <<https://www.nature.com/articles/d41586-020-03626-1>>

The COVID-19 vaccines were developed rapidly, in just a year, because of a combination of factors. These are as follows: years of advanced research on related coronaviruses, such as SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome), and viral vectors; breakthrough technologies (e.g. gene-based vaccine platform); concentration of financial and human resources; and faster regulatory review.



## 4

### What are the different vaccine-preventable diseases?

The World Health Organization (WHO) lists 25 diseases for which vaccines are available. Many of these were developed in the 20th century following scientific advancements. These diseases include cholera, COVID-19, dengue, diphtheria, haemophilus influenzae type b, hepatitis (a, b and e), human papillomavirus infection, influenza, Japanese encephalitis, malaria, measles, meningococcal disease, mumps, pertussis, pneumococcal disease, poliomyelitis, rabies, rotavirus gastroenteritis, rubella, tetanus, tick-borne encephalitis, tuberculosis, typhoid, varicella, and yellow fever. Other vaccines or monoclonal antibodies are currently under development or undergoing trial, such as those that protect against herpes simplex virus, HIV-1, neisseria gonorrhoeae, and shigella.

**Sources:** World Health Organization <<https://www.who.int/teams/immunization-vaccines-and-biologicals/diseases>>

## 5

### What disease has been eradicated by a vaccine?

A global immunisation effort spearheaded by WHO eradicated the smallpox. South America became smallpox-free in 1970, followed by Asia in 1975. The last known wild case of smallpox was detected in 1977 in Somalia. WHO officially declared the world free of smallpox in 1980.

WHO targeted the eradication of polio by 2018; however, outbreaks have occurred in a number of countries that had been declared polio-free for decades, including in Indonesia (2019), Malaysia (2020), and the Philippines (2019). Polio also remains endemic in Afghanistan and Pakistan. A global public-private alliance called the Global Polio Eradication Initiative seeks to eliminate polio by intensifying surveillance, containing outbreaks, accelerating the vaccination drive in polio-endemic countries, and sustaining routine vaccinations to maintain high-level of population immunity.

**Sources:** World Health Organization <<https://www.who.int/publications/i/item/global-vaccine-action-plan-2011-2020>>; Global Polio Eradication Initiative <<https://polioeradication.org/gpei-strategy-2022-2026/>>

## 6

## How are COVID-19 vaccines different from other types of vaccines?

Some COVID-19 vaccines, such as Sinovac, were developed using conventional or “old school” techniques, i.e. growing the disease-carrying virus in the lab and inactivating its genetic material through chemicals, heat, or radiation so it cannot replicate and infect cells but can still elicit an immune response. This is the same method used for making flu and polio vaccines.

Other COVID-19 vaccines, however, were developed using newer approaches. Instead of carrying an inactivated form of the coronavirus, the **messenger RNA (mRNA) vaccines** developed by Pfizer BioNTech and Moderna contain instructions for producing a component of the pathogen—in this case the spike protein of the coronavirus. Once this component or antigen is manufactured in the human cell, the immune system is prompted to make antibodies to destroy the hostile organism. While the two mRNA-based COVID-19 vaccines were the first of their kind, the mRNA platform (means of getting viral mRNA into the body) has been around for years and used specifically in preclinical and clinical studies for treating cancer.

The **viral vector vaccines**, such as the Oxford AztraZeneca and Johnson & Johnson vaccines, use a similar gene-based approach. However, they use a harmless vector or carrier, in this case the adenovirus, for delivering the genetic template for making the spike protein. Similar to the mRNA vaccines, once human cells begin producing this antigen, the body's immune response is activated. Viral vector-based technology was also used in the development of vaccines for Ebola and dengue.

**Sources:** Centers for Disease Control and Prevention <<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/viralvector.html>>; World Health Organization <<https://www.who.int/news-room/feature-stories/detail/the-race-for-a-covid-19-vaccine-explained>>; Gavi <<https://www.gavi.org/vaccineswork/what-are-whole-virus-vaccines-and-how-could-they-be-used-against-covid-19>>

## 7

## What is herd immunity and why is it important?

Herd immunity is achieved when a substantial portion of the population is protected against an infectious disease, either by acquiring natural immunity due to previous exposure or through vaccination. Herd immunity prevents or stops the sustained transmission of a disease within a population.

Allowing a disease to run rampant through the population to gain natural immunity to it could lead to unnecessary suffering, illness, and deaths. Thus, institutions like WHO and countries around the globe aim for herd immunity against most diseases through vaccinations.

Herd immunity particularly protects people who cannot safely take the vaccines, such as newborn babies, individuals who are seriously ill, or those with weak immune systems.

According to WHO, the percentage of people that must be immune to attain herd immunity varies for each disease. For highly contagious diseases such as measles, more than 95 per cent of the population must be vaccinated, while for polio, 80 per cent is the threshold.

The proportion of the population that needs to be vaccinated against COVID-19 to reach herd immunity is not yet known. However, most countries set their targets at 70 to 80 per cent. To date, less than 10 percent of the population of low-income countries had been vaccinated due to limited supplies. ■

**Sources:** World Health Organization <[https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19?gclid=Cj0KCQjwklGKBhCxArisAINMioKQVTadZFfYiunF6RAZSUtnvKODXL\\_6g7\\_KdZhUvQkrp3YtinCvL8aAtVdEALw\\_wcB#](https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19?gclid=Cj0KCQjwklGKBhCxArisAINMioKQVTadZFfYiunF6RAZSUtnvKODXL_6g7_KdZhUvQkrp3YtinCvL8aAtVdEALw_wcB#)>; <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--8-september-2021>; University of Oxford <<https://vk.ovg.ox.ac.uk/vk/herd-immunity>>

COMPILED BY JOANNE B. AGBISIT, ASSOCIATE EDITOR, THE ASEAN





## Carina Joe, PhD Vaccine Research Scientist

**Scientists around the world raced at lightning speed to produce COVID-19 vaccines that are safe for millions of people worldwide. Indonesian scientist Carina Joe was one of them.**

Carina is part of a group of scientists with the Jenner Institute at the University of Oxford, United Kingdom who developed the Oxford-AstraZeneca vaccine. She worked tirelessly to complete the large-scale manufacturing process of the vaccine in record time. The vaccine is now used in over 170 countries.

At the Jenner Institute, Carina investigates improved methods of manufacturing vaccines, including adenovirus vectors. She took her master's degree and PhD in biotechnology at the Royal Melbourne Institute of Technology, Australia, and worked at the Commonwealth

Scientific and Industrial Research Organization (CSIRO) before joining the Oxford University.

Carina talks about her journey as a scientist in an interview with **Staff Writer Novia D. Rulistia**.

**What inspired you to pursue a career in biotechnology? Was it always your dream to become a scientist?**

**Carina:** When I was little, my dream was to be a doctor or a scientist. I got interested in science during my high school days when the biology teacher was explaining the molecular biology concept of how changes in genetics could lead to phenotypic changes. I found that very intriguing. From then on, I did my research on the topic and found out that biotechnology courses are

mostly available overseas, and it sort of continued from there since my mentor and supervisor always encouraged me to continue my education.

**Can you describe your journey to becoming a researcher with Oxford University? What challenges did you face, particularly as an Asian woman in your chosen field?**

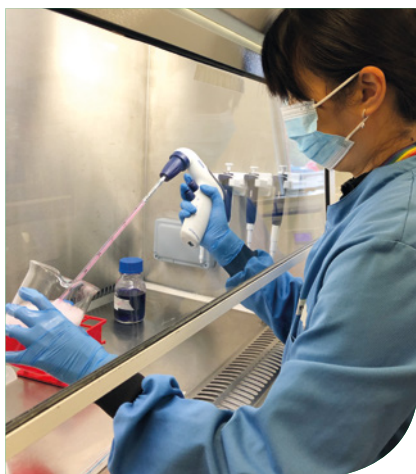
**Carina:** There is not much to describe on my journey to becoming a researcher with the Oxford University. If one wants to be in the position, then one has to be the best candidate out of all the other applicants. They selected me because I have the right expertise and skill set for the position among all the other applicants. They knew straight away that I would be suitable since I have seven years of experience in the scientific industry because I did a full-time internship in parallel with my full-time master and PhD studies. For me, the challenges as an Asian and a woman are the same with other researchers. For a relatively new researcher in the field, we would like to establish our direction in the field because the science field is a big area, so researchers have to find their own pathway in the community at the beginning of their career. We would like to prove our capability in the field.

**Can you share how you first got involved in the Oxford-AstraZeneca vaccine project? As the lead scientist in the development for large scale vaccine manufacturing, can you also tell us what it was like behind the lab so that you and your team managed to complete the process in less than two years?**

**Carina:** Initially, I was recruited (by the Oxford University) for optimising the manufacturing process for the rabies vaccine, and my group is in charge of its clinical trials in the UK and Tanzania. The rabies vaccine shares the same vector as the Oxford-AstraZeneca vaccine in using ChAdOx or chimpanzee adenovirus vector as the delivery vehicle for the medically relevant antigen.

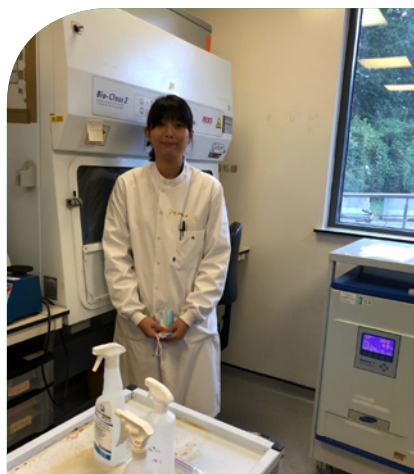
I joined the group a few months before the pandemic, and when the pandemic happened, the priority in the project had changed, and we needed the COVID-19 vaccine urgently, both for the clinical trial and the emergency use after the vaccine passed the clinical trial. Therefore, my project was switched to developing the cGMP (Current Good Manufacturing





Practice) large scale manufacturing process for the Oxford-AstraZeneca vaccine. Our group realised that even if the vaccine is effective, having no means to produce it in a large number is the same as having no vaccine at all. This is because vaccines are only useful when they are used in a large population.

At the beginning of February 2020, I only had the results from the small-scale production, which equated to two tablespoons. But I managed to do a breakthrough in the research by increasing the yield by 10-fold more than the previous process. We did not have enough time to spare because the vaccine was urgently needed, and we could not recruit more postdoctoral scientists with the same skill set during the pandemic. Also, to be able to be involved in this process development required years of training. Nevertheless, I only have 1.5 months to develop a cGMP manufacturing process to be simulated on 200L scale, which now seems like an impossible task since a process development normally takes two to three years to complete. Our team is small: My supervisor Dr. Sandy Douglas and I were the only ones who knew how the process worked; and Dr. Adam Ritchie, the project manager who managed the budget and supplies. We all worked for 15-16 hours a day, seven days a week, without any break to ensure that everything was done perfectly according to the specification. I could not afford to make any mistake because one mistake meant that I had to repeat the entire process, and we could not afford any delay in the process. We then completed the development process up to 2,000L scale



in six months (record time) in which the first batch of vaccine from Cobra (one of the cGMP facilities in our consortium) was used for clinical trial phase 2 of 3 in the UK, South Africa, and Brazil.

**The vaccine has been used worldwide, but new variants are emerging. How are you and your research team responding to these new variants? Are there any follow-up studies/research on the Oxford-AstraZeneca vaccine that you're currently working?**

**Carina:** On the new variants, the government is keeping an eye on any possible variants that potentially emerge in the community by conducting frequent PCR tests. They also keep collecting data on the vaccine efficacy in the community against the new variant, and so far, the vaccines that have been approved in the UK are still effective against the new variant. There has been no recommendation yet to use the new variant vaccines, however, all pharmaceutical companies have prepared the new variant vaccine for good measure, but they have to pass the clinical trial before they can be used for the public.

**Many people still refuse to get vaccinated for various reasons. What do you think of this vaccine hesitancy, and in your opinion, what should be done to enhance public trust in vaccination?**

**Carina:** There is a lot of incorrect news circulating, and there is a question regarding vaccine safety that amplifies the vaccine hesitancy problem. I would like to encourage the public to find the right source of information from credible

*Carina worked around the clock to complete the manufacturing process of Oxford-AstraZeneca vaccine*

sites, such as the health regulator and government, on which they have stressed the benefit of vaccination to end the pandemic. Also, I think there is a misconception regarding the development of vaccines. The COVID-19 vaccine is indeed developed in an unusually fast time; however, the technology itself has been developed for 10 years prior and used for other types of vaccines, such as MERS, Zika, rabies, etc., which have gone through clinical trials and have a long history of safety profile. Therefore, all the vaccines that have been approved by the health regulators are safe and effective.

**Do you see yourself working on vaccine development in the future? Or are there any fields or projects you would like to pursue? Do you see yourself returning and working in Southeast Asia?**

**Carina:** My skill set and expertise are not only limited to vaccines; I can also choose to work with a wide variety of biological products. However, at the moment, I am interested in working with the platform technology in vaccines that can be easily modified for various other diseases. I do not know in the far future if I will be returning to Southeast Asia because, as a postdoc, my location is largely determined by the direction of the project. In short, wherever my expertise is needed, then there I will be.

**What are your aspirations for scientists and researchers from Southeast Asia?**

**Carina:** Collaboration between the academia, industry, and government is key to a supportive scientific environment. With the supportive environment towards the scientific field, then the scientific community can flourish with critical thinking, invention, and breakthrough, which will attract the younger generation to consider science as their prospective career. I aspire for Southeast Asia to be the birthplace for new technologies and inventions that can bring the benefit not only in Southeast Asia but also recognised around the world. ■

*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.*



# MISINFORMATION AND DISINFORMATION IN A PANDEMIC



**LUZ R. RIMBAN**

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**Luz Rimban is a veteran journalist and executive director of the Asian Center for Journalism at the Ateneo de Manila University. She teaches journalism at the Ateneo Department of Communication.**

**Ms. Rimban writes about the dangers of spreading false information during the pandemic and the shared responsibility of both the media and the public in preventing it.**

In early September, a rumour spread that Pasig City Hall in Metro Manila was shut down after some employees contracted COVID-19. Attached to that was another rumour: that the city's vaccination program was suspended due to the shutdown, forcing people scheduled for inoculation to stay away.

Like most examples of misinformation, this one had elements of truth. The city did order the closure of some offices

where employees tested positive for the virus, but what was false was the suspension of the vaccination programme and the lockdown of the whole city hall.

Misinformation has also fueled potential superspreader events like those that happened in early August. City officials were caught off guard by the deluge of people queuing for vaccinations in Manila, Las Piñas and Antipolo on 5 August, supposedly spurred by rumours that these

would be discontinued once the severe lockdown takes effect the next day. Panicked citizens descended on malls that had been designated as vaccination centres, on the mistaken belief that they would be denied government assistance if they remained unvaccinated.

In a country lagging behind the rest of the world in vaccinations, false information holds the Philippines back even further. While 41 per cent of the world's population has already received at least one dose of the vaccine, in the Philippines the rate is 16.8 per cent, according to the website *Our World in Data*. And what makes the need for a stepped-up pace of vaccinations more urgent has been the rapid spread of the Delta variant in the last few months. On 11 September alone, the Philippines recorded more than 26,000 COVID-19 cases.

How could false information spread so fast and so stealthily? Pasig City mayor Vico Sotto offered some explanation. "The news that reached a Viber group was that the whole

city hall was locked down and the vaccination had been suspended,” Sotto said in a tweet on 2 September. “Covid spreads quickly, but disinformation spreads even faster,” he added. Although Sotto was referring to the September incident in Pasig, he could have been offering a clue to what happened in the other cities a month earlier.

Messaging apps like Viber, Facebook Messenger, WhatsApp, Telegram, and Signal have become a growing focal point of misinformation and disinformation. What exactly transpires in these apps happens outside the scope of fact-checking and verification efforts. These conversations happen privately, in encrypted form, mostly in closed, intimate groups where users belong to families or clans, or are otherwise linked by education or profession, or shared interests, beliefs, convictions, and advocacies.

In September 2018, the Oxford University-based Reuters Institute for the Study of Journalism commissioned Kantar Media to examine this growth in messaging apps. Users were turning away from Facebook for its failure to provide meaningful and relevant social connections that had attracted them to it in the first place. The study focused on four countries: Brazil, Germany, the United Kingdom, and the United States. It found that since 2014, messaging apps led by WhatsApp had “grown remarkably as a tool for news among social media users in Brazil, and it has at least doubled in the other three countries.”

The study’s findings now appear relevant elsewhere, including the Philippines, especially after COVID-19 forced the world into lockdown and people into isolation and loneliness. Online communities such as those nurtured in messaging apps or even social media groups offer a semblance of belonging despite the physical distance and a lifeline to the rest of the world.

The Reuters study found, “News might be picked up in Facebook and then shared in the privacy and greater intimacy of WhatsApp. Facebook is where news is announced, while WhatsApp is where it is copied across and discussed.” For users who belong to multiple groups on these

messaging apps, the sharing of information, true or false, can happen at exponential rates, and the fallout would have happened even before traditional media have caught on, as the August incidents showed.

In the Philippines, messaging apps have gained popularity as vehicles of commerce, news, government updates, and social connections. The leading messaging app is Facebook Messenger, but WhatsApp, Telegram, and Signal remain among the most used. In January this year, Viber reported a 24 per cent increase in the number of users in the Philippines, part of the more than 400 per cent jump in users in the Asia Pacific region.

To be fair, these messaging apps have many legitimate uses. They have become common among workplace communities in a work-from-home environment and the academe, where they are used to supplement online learning modes. Messaging apps are how students stay in touch with classmates and teachers outside online class hours and how group work gets done. The Department of Health provides daily updates on the COVID-19 situation on Viber while media groups post news stories on their Viber accounts as an alternative source to social media.

But the danger of misinformation and disinformation spreading on

these ubiquitous tech applications cannot be discounted, especially in the Philippines, where the infrastructure for online communication remains unreliable. A few months ago, the local government of Quezon City, the biggest city in Metro Manila, became the object of frustration and criticism after its vaccination registration platform, ezconsult.io, experienced repeated crashes. Residents took to Facebook to vent their frustrations at the difficulty of securing vaccine appointments. Messaging apps, as well as Facebook groups, became the go-to sites for questions and solutions to such problems.

While vaccinations are a national concern, and mainstream media monitor vaccine efforts, there is only so much that journalists can do, given how dispersed the efforts are. As vaccination efforts continue, it is becoming clear that local government units are playing a major role in ensuring a smooth rollout and delivery of accurate information.

At the same time, media literacy efforts have to continue to inculcate in social media users the discipline of checking information that comes their way and the restraint in sharing messages that land on their phones. ■

#### Disclaimer:

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of ASEAN.





# *Snapshots*

# ASEAN HUMANITARIAN ASSISTANCE TO SUPPORT THE PEOPLE OF MYANMAR

DISASTER MANAGEMENT AND HUMANITARIAN ASSISTANCE DIVISION  
ASEAN SOCIO-CULTURAL COMMUNITY DEPARTMENT

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ASEAN, supported by its partners and friends, has delivered humanitarian assistance to the people of Myanmar to help contain the spread of COVID-19. The handover ceremony of the first batch of assistance from ASEAN to Myanmar Red Cross Society (MRCS) was held on 15 September 2021 via video conference.



The Secretary-General of ASEAN, Committee of the Permanent Representatives (CPRs) of the ASEAN Member States, and representatives from donor countries and international organisations attended the ceremony. The first batch, valued at over 1.1 million US dollars, was contributed by cash and in-kind contribution from the Government of Indonesia, the Philippines, Thailand, Turkey, and Temasek Foundation International.

The assistance is in the spirit of the "One ASEAN, One Response." It is also part of the implementation of the "Five Point Consensus" on ASEAN's positive and constructive role in facilitating a peaceful solution in Myanmar, as agreed upon by the ASEAN Leaders' Meeting on 24 April 2021.

The delivery of the humanitarian assistance is spearheaded by the







Secretary-General of ASEAN, Dato Lim Jock Hoi, as the ASEAN Humanitarian Assistance Coordinator (SG-AHAC) and supported by the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre). Since 2011, AHA Centre has served as the operational engine for disaster management and emergency response in ASEAN. On the ground, the AHA Centre is working with the MRCS to ensure that the assistance reaches the people in need. In addition, the ASEAN Monitoring Team was also established to ensure transparency and accountability of the delivery of the aid.

The immediate humanitarian assistance focuses on supporting the people of Myanmar in addressing the dire situation of the COVID-19 pandemic in the country. According to the data from ASEAN BioDiaspora Virtual Centre, as of 13 August 2021, the case fatality rate in Myanmar was 3.7 per cent which is the highest in the ASEAN region and higher than the global case fatality rate of 2.1 per cent. In addition, the vaccination rollout in Myanmar is lagging behind all other ASEAN Member States. Hence, phase 1 of the humanitarian assistance provided

**“The immediate humanitarian assistance focuses on supporting the people of Myanmar in addressing the dire situation of the COVID-19 pandemic in the country.”**

is in the form of COVID-19 vaccines and medical supplies, including personal protective equipment, test kits, medicines, and ventilators, all of which are required to support the effective response to and mitigation of the pandemic in Myanmar.

On 18 August 2021, the Secretary-General of ASEAN hosted the Pledging Conference to Support ASEAN's Humanitarian Assistance in Myanmar. The conference was attended by ASEAN Foreign Ministers, ambassadors of ASEAN external partners, representatives of the United Nations agencies, and the International Federation of Red Cross and Red Crescent Societies and the International Committee of the Red Cross. It raised the equivalent of almost 8 million US dollars in monetary pledges and in-kind contributions of medicine, medical supplies, and equipment to assist the people of Myanmar in containing the spread of the COVID-19 virus. ■



# ASEAN DEVELOPMENT OUTLOOK EXAMINES THE REGION'S PROGRESS TOWARDS INCLUSIVE AND SUSTAINABLE DEVELOPMENT



JOANNE B. AGBISIT  
ASSOCIATE EDITOR  
THE ASEAN

**ASEAN has emerged as an important economic bloc with a concrete policy agenda for inclusive and sustainable development, but it is confronted with major challenges that its Member States must individually and collectively address to enable people in the region to achieve their full potential and well-being. This is highlighted in the inaugural issue of the *ASEAN Development Outlook*, which was officially launched on 23 August 2021.**

The report specifically looked at the goals, successes, gaps, challenges, and prospects in four priority areas of the ASEAN Socio-Cultural Community (ASCC) pillar: identity, environment, livelihood, and social welfare and health.

## ASEAN Identity

"Within the ASEAN region, there is a richness of multi-ethnic and multi-religious identities," says lead researcher Shailaja Fennell of the University of Cambridge at the virtual launch of the report. These diverse identities are a source of strength rather than a liability and can be harnessed to find solutions and drive change.

The narrative of ASEAN identity, which the report cites as a key step towards articulating the region's shared values and heritage amid differences, must be developed through a participatory process to be truly representative of the region, create a sense of belonging, and contribute to social harmony.

Whether at the regional or national level, identity-making must bring into the fold the histories, ways of life, voices, and experiences of individuals and

communities, especially those distanced by location, ethnicity, gender, or disability. "For ASEAN to be inclusive and move towards sustainability, they need to take seriously the adage 'no one gets left behind,'" says Fennell.

ASEAN also needs to grapple with current developments, such as the COVID-19 pandemic, climate crisis, and the proliferation of fake news, which are creating a toxic environment of distrust and intolerance and undermining ASEAN's efforts to foster a collective sense of identity, says Jonathan Tan, Head of Culture and Information Division of the ASEAN Secretariat.

## Natural and Built Environment

Climate change, meanwhile, is the greatest existential threat to the natural and built environment of ASEAN, according to the report. It has resulted in rising sea levels and increased the frequency and severity of climate-related disasters—claiming lives, displacing populations, and wrecking human-made structures and systems.

At the national level, Member States have put in place mitigation measures, such as limiting greenhouse gas emissions in line

with the Paris Agreement, and adaptation measures, such as restoring mangroves to serve as a buffer against typhoons and flooding. At the regional level, key initiatives include the ASEAN Agreement on Disaster Management and Emergency Response and its work plans, which espouse proactive and science-based disaster forecasting, knowledge-sharing, and community-based interventions, and the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre), which provides emergency response and humanitarian assistance during disaster events.

But ASEAN can and should do more, the report argues. It says that disaster management and resilience-building require more resources than what ASEAN currently invests.

ASEAN decisions on environmental matters should also be based on evidence-based information. "For example, a full cost-benefit analysis of continued reliance on coal energy shows that it is just unsustainable and energy policy needs to consider this for the future survival and well-being of all citizens," says Jane Lichtenstein of the University of Cambridge research team.

The report notes that ASEAN has an opportunity to step up its commitment to clean energy transition, which will enhance its leadership in global climate action. David King, founder and chair of Cambridge Centre for Climate Repair, warns that ASEAN and the rest of the world cannot afford inaction as the dire consequences of climate change are upon us. "The first message is don't invest any further in fossil fuel futures; secondly, manage your natural forests, peats, mangroves, and sea systems," he says.

## Livelihood

Decent livelihood springs from good quality education. According to the report, while ASEAN Member States have had successes in raising primary and tertiary enrolment over the past decades, many other educational indicators have fallen



**“While training and upskilling workers are important, it can only be effective if decent jobs are available and if the skills acquired are effectively utilised and equitably remunerated.”**



by the wayside. A substantial number of school-age children in the region have either never gone to school or dropped out due to poverty, location, disability, and other factors. Forced early marriage also remains a problem in parts of Southeast Asia.

“The barriers that exclude are multiple and intersecting and they produce learning deficits. Learning is past-dependent and cumulative, so the deficits of today will magnify over time,” says Nafisa Waziri of the University of Cambridge research team.

Learning outcomes are also uneven across and within ASEAN Member States. Improving learning outcomes, the report points out, requires investing in both *people*, such as through teacher training and salaries, and *process*, such as by developing innovative teaching methods and adopting information and communication technologies.

“Most ASEAN countries invest less than 3,000 US dollars per student per year,” says

Javier Gonzalez Dias of SUMMA. “There is an important link between quality and resources, so there is room for improvement.”

Ensuring that school curricula will equip children not only with 21st-century skills but also with locally relevant and meaningful knowledge is equally important. Children’s nutrition, positive social engagement, and responsive caregiving should also be given attention since they impact future learning outcomes, Waziri adds.

In the world of work, ASEAN’s policies have focused on technical and vocational education and training (TVET) to increase employability and encourage self-employment, and on creating a conducive business environment for medium, small and micro-enterprises (MSMEs). But location, gender, migration status, age, and disability exclude individuals from participating in and benefitting from these policy initiatives.

Moreover, focusing on workers’ training alone is inadequate. “While training and

upskilling workers are important, it can only be effective if decent jobs are available and if the skills acquired are effectively utilised and equitably remunerated,” says Waziri. Therefore, ASEAN Member States must engage the private sector to go beyond skills identification and training provision to include recognition, remuneration, and social protection.

### Social Welfare and Health

In ASEAN, there is no shortage of regional declarations and action plans or country-level programmes to improve people’s welfare and health. Some of the region’s major initiatives include the Declaration on Strengthening Social Protection, Declaration on the Protection and Promotion of the Rights of Migrant Workers, and Declaration on the Elimination of Violence Against Women and the Elimination of Violence Against Children, and Leaders’ Declaration on Ending All Forms of Malnutrition. Achieving universal health care is also a core goal of the ASEAN Post-2015 Health and Development Agenda.

Still, numerous challenges and gaps remain. Different forms of malnutrition—i.e., low birth weight, stunting, obesity, diabetes, anaemia—are prevalent in all ASEAN Member States.

“The nutrition burden can be addressed through taxation and dietary guidelines to incentivise healthy consumption and ensure the affordability and nutritional value of food,” says David Clark of the University of Cambridge research team.

Shumone Ray of NNEdPro Global Centre for Nutrition and Health adds, “We need to think about transforming food systems in a way that not only produces more and addresses zero hunger as SDG (Sustainable Development Goal) 2 on the surface but also creates affordable, healthy diets. The State of Food Security reports give us key strategies on how to do this, particularly by addressing not just inequality, but equity—giving those with more challenging starting points a higher platform to stand on.”

Even before the onset of COVID-19, some populations were at high risk of contracting infectious diseases and neglected tropical diseases because of crowded housing,





# 54<sup>TH</sup> ASEAN DAY CELEBRATION “WE CARE, WE PREPARE, WE PROSPER”



**PRICILIA PUTRI NIRMALA SARI**  
OFFICER, ASCC ANALYSIS DIVISION

**ASEAN 54th anniversary was celebrated online on Sunday, 8 August 2021. Taking the theme of “We Care, We Prepare, We Prosper,” this year’s celebration reflected the 54-year journey filled with hopes, achievements, and dreams for a stronger and more inclusive ASEAN Community.**

Reflecting on the lessons learned from the COVID-19 pandemic, Secretary-General of ASEAN Dato Lim Jock Hoi opened the ceremony by highlighting how ASEAN has managed to use the opportunity to become a more inclusive and resilient community while remaining vigilant to new challenges.

“The fight against the pandemic remains a regional priority and a prerequisite to regional recovery. To this end, the ASEAN Comprehensive Recovery Framework and its Implementation Plan, adopted at the 37th ASEAN Summit last year, lays out ASEAN’s strategies through the various recovery stages and beyond, focusing on sectors and segments of society that are most affected by the pandemic,” he said.

The Secretary-General also spoke about the important role of ASEAN in accelerating inclusive digital transformation and sustainability for achieving regional recovery.

In her remarks, Indonesia’s Minister of Foreign Affairs Retno Marsudi said that ASEAN should seize the momentum to recover stronger together amidst the challenges.

“ASEAN must continue to innovate, developing new and better mechanisms to strengthen our region’s resilience. Recent surges of cases remind us to maintain ASEAN’s spirit of solidarity and cooperation, which have been on full display since the beginning of the pandemic,” she said.

Aside from the challenges posed by the COVID-19 pandemic, Minister Marsudi also stressed the importance of ASEAN’s important role in shaping regional dynamics by embracing dialogue, mutual trust, strategic collaboration, and demonstrating the virtue of ASEAN centrality in addressing regional concerns.

The celebration highlighted how the ASEAN Secretariat embraces inclusivity and diversity. In addition, university

students with autism testified about how they benefited from their internships at the secretariat in 2020.

There were also well-wishes from various ASEAN entities and members of vulnerable communities, including representatives from the ASEAN Autism Network and the ASEAN Disability Forum. They expressed hope for an even more inclusive ASEAN Community, where the rights of those with disabilities or special abilities will continue to be respected.

This year also marks the 20th anniversary of the ASEAN Gallery founded by Rodolfo Severino Jr., the 10th Secretary-General of ASEAN. To celebrate this milestone, a coffee table book titled “August Gathering” was launched during the online celebration. The book features the best of the ASEAN Gallery collection of precious works of art created by some of the world’s most renowned artists and ASEAN masters.

A revamped ASEAN website was also launched during the joyous occasion. The one-stop portal comes with a new design that improves user experience and is integrated with multiple digital platforms, such as the ASEC Resource Centre and other ASEAN entities. ■





*Bridges*

# AN ENDURING FRIENDSHIP INDIA AND SOUTHEAST ASIA RELATIONS



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“From the legend of Rama to the wisdom of Buddha  
our ties are founded on a shared cultural heritage”  
-Prime Minister Narendra Modi





India and the states comprising the Association of Southeast Asian Nations (ASEAN), which are Indonesia, Malaysia, Philippines, Brunei Darussalam, Thailand, Singapore, Myanmar, Lao PDR, Viet Nam, and Cambodia were connected integrally in their economic, social, and political life. These relations go back over two millennia. The more important relations between Southeast Asia and India can be found in the shastras (religion, scripts, literature, politics, law) and architecture. Early contacts between South and Southeast Asia were precursors to the spread of Indic ideas to Asia (Nilakanta Sastri, 1949).

The Southeast Asian region has been influenced by Indian political ideas, religion, art, culture, etc. However, the transmission and assimilation of culture were not due to any political domination. Instead, it was a result of peaceful means carried out by Indian princesses, priests, merchants, artists, poets. The Ananda

Temple in Myanmar's ancient city of Bagan, the Borobudur Temple dating back to the 8th and 9th century in the island of Java, Indonesia, Prambanan, the Angkor Wat temple complex in northern Cambodia built in the first half of the 12th century are evidence of the rich linkages between the two that are well recognised. Similarly, the spread of Indian mythology, folklore have been well documented. The Malaysian and Cambodian adaptation of the Ramayana, the Seri Rama and RamKer (Ramayana Khmer) are some of the literary works in Southeast Asia held in great esteem to date.

The cultural linkages between India's northeast and Southeast Asia have, however, remained relatively unknown. For example, the people living on the border between Manipur (India) and Myanmar share centuries of ethnic and cultural linkages. These people of the India-Myanmar borderland share more

commonalities and have closer affinities with the Southeast Asians than with their fellow men and women in the rest of India. Barter trade, which is an age-old practice among them, is a natural outcome of their symbiotic relations to meet their daily needs. This has sealed the bond between them even further. The common food habits, traditional weaves, similar celebration of festivals, etc., are a testimony of historical interrelationships across the region. Similarly, India can refer to the Southeast Asian roots of the Tai Ahom as a witness to the cross-cultural linkages and interaction between India's northeast and Southeast Asia. The development of agriculture, especially rice cultivation, indicates the common regional legacies and that the historical interactions provide commonalities in attitudes to nature. In the last century, the exchange of ideas and artistic techniques and forms travelled from Southeast Asia when Ravindra Nath Tagore brought the batik form of art



## “Southeast Asia’s strategic position in the maritime route connecting East and West brought inevitable interaction between Southeast Asian peoples and Indian merchants.”

from Indonesia to India and taught it to the students in Santiniketan. Similarly, musical influences and exchanges are compelling themes to establish their linkages for future researches on the history of music in India and Southeast Asia.

Southeast Asia’s strategic position in the maritime route connecting East and West brought inevitable interaction between Southeast Asian peoples and Indian merchants. Southeast Asia was particularly attractive to the Indian mercantile class. While Southeast Asian coastal centres provided suitable stopping places for traders, thereby facilitating the flourishing of trade (Hall, 1985 and 1999). Both India and the ASEAN countries continue to seek and secure maritime lines of communication such as the Strait of Malacca for international trade and increase connectivity infrastructure till the present day. This shows the high level of convergence of interests and concerns between both sides on the issue of maritime connectivity, rules-based order at sea, freedom of navigation and overflight, unimpeded commerce and peaceful resolution of disputes. Thus, both oral and written historical evidence confirm that India and the countries of Southeast Asia have enjoyed close relations with each other. And the process marks a continuum reflecting the mutual interplay between them.

While the advent of western colonialism and imperial conquest disrupted the network of trade and cultural ties that flourished, India and Southeast Asian linkages were impeded first by colonialism and subsequently by the cold war politics. However, they were revived since the end of the Cold War, in the early 1990s through India’s Look East Policy. It has since gathered enormous momentum and evolved

into a comprehensive relationship encompassing economic, political and strategic aspects.

The 25th anniversary of India-ASEAN relations was celebrated through the Commemorative Summit on 25 January 2018 with the theme “Shared Values, Common Destiny.” It provided an opportunity to demonstrate their will to deepen their partnership. To mark their partnership, all 10 Heads of State/ Governments of ASEAN countries graced the occasion as Chief Guests at the 69th Indian Republic Day Parade. For the first time India had 10 foreign heads of state/ government as Chief Guests at the Republic Day parade. The event was marked by the India-ASEAN Youth awards, the ASEAN-India Business and Investment Meet and Expo, the inauguration of Bharat-ASEAN *Maitri* Park in New Delhi, and the conferment of the Padma Shri award to 10 ASEAN nationals. While culture featured prominently during

the Summit, with emphasis given by both sides to their ancient cultural and civilizational links, several other activities that were undertaken also demonstrated their determination to strengthen their relations.

Earlier in 2015, while leading the Buddha Purnima prayers, Prime Minister Narendra Modi had clearly placed Buddhism at the centre of India’s diplomatic initiatives when he said, “the 21st Century will be Asia’s century, and without Buddha, this cannot be Asia’s century.” Connectivity was being promoted to encourage more people to visit important Buddhist sites and monasteries in India and thereby advance greater interaction. Although the centrality of culture and religion in deepening bonds between them are being emphasised in recent times, much remains to be done in carrying this forward. Several initiatives are unfortunately delayed due to the COVID-19 pandemic. Nevertheless, the unique relationship has gained substance through centuries, exhibiting an evolving pattern. What is striking and beautiful in India and Southeast Asia relations is that neither of them is a menacing neighbour to each other, nor do they entertain parallel territorial claims either inland or adjacent waters. ■

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# EXCHANGES FOR PEACE AND PROSPERITY BETWEEN INDIA AND ASEAN



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**India's rich ethnic and religious diversity mirrors a similar diversity in ASEAN countries. Intercultural understanding is a crucial component in harnessing heterogeneity and turning it into a strength for the growth of a country and region. Travel and dialogue are key factors in making this vision a reality.**

**The ASEAN-India Partnership for Peace, Progress, and Shared Prosperity continues the long-time exchanges between India and the countries in the ASEAN region. This partnership includes an array of exchange programmes aimed to strengthen ties and deepen understanding. Programmes range from longer-term academic study to shorter exchanges involving children, youth, media personalities, diplomats, and scholars.**

**From Bhubaneswar to Pune, and New Delhi to Bengaluru, these people-to-people exchanges have provided an opportunity for ASEAN citizens to experience India's rich cultural and natural heritage, and deepen their appreciation for both India and the ASEAN region. It has also offered future young leaders an opportunity to develop their leadership potential and promote international goodwill.**



ASEAN civil servants attended a week-long training programme in e-payments, held in Hyderabad in 2019. This course aimed to develop financial inclusion and address social security needs for the urban poor.



Youth from ASEAN and India attended the 1st ASEAN-India Youth Summit held in Bhopal in 2017 to mark the 25th Anniversary of the ASEAN-India dialogue partnerships. The 2nd ASEAN-India Youth Summit was held in Guwahati in 2019. At both summits, 20 ASEAN-India Youth Awards were awarded to youth from ASEAN and India.



Over 1,500 students from ASEAN countries and India have participated in the ASEAN-India Students Exchange Programme held between 2007-2018. Cities visited include Mumbai, Pune, Agra, and Delhi.



Six students from Cambodia and Viet Nam completed their master's or post-graduate diplomas at Nalanda University in 2018-2020. The programme, which catered to students in Cambodia, Lao PDR, Myanmar, and Viet Nam, provided research opportunities in philosophical, historical and spiritual studies, and liberal arts. The second cycle of the programme will be expanded to include 20 students from all ASEAN countries.



Ten students from ASEAN countries received the India-ASEAN Goodwill Scholarships. They participated in the International Summer School in New Delhi, India, in 2016 and 2017.



Over 70 journalists and media personalities have participated in ASEAN-India Media Exchange Visits between 2015-2018. Attendance at the Delhi Dialogues was enriched with visits to Guwahati, Shillong, Agra, and Bengaluru. In turn, an eight-person delegation from India visited Cambodia and Indonesia in 2018.



ASEAN school children participated in the 26th National Children Science Congress held in 2018 in Bhubaneswar, India.





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The  
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