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Regional Governance on Covid-19 Vaccination in The Southeast Asia

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ABSTRAK

Vaksin Covid-19 merupakan salah satu upaya pencegahan penyebaran Covid-19. Setiap orang di dunia ini berhak mendapatkan vaksin Covid-19 sehingga diperlukan tata Kelola agar distribusi vaksin dilakukan secara merata. Artikel ini bertujuan membahas tata Kelola regional mengenai vaksinasi Covid 19 di Asia Tenggara yang dilihat dari program vaksinasi Covid 19 di negara-negara yang berada di Kawasan Asia Tenggara. Dengan menggunakan konsep regional governance dan metode studi literatur sistematis, artikel ini menemukan bahwa negara-negara di Asia Tenggara telah melakukan Kerjasama bilateral dengan perusahaan atau negara produsen vaksin. Dalam ruang lingkup tata Kelola regional, ASEAN menjadi fasilitator distribusi vaksin guna menjamin negara-negara anggota ASEAN mendapatkan vaksin secara merata.

ABSTRACT

One of the efforts to prevent the spread of Covid-19 is the Covid-19 vaccine. Everyone in the world has the right to access a Covid-19 vaccine, so governance is needed to guarantee that vaccine distribution is fair and equal. This article aims to discuss the regional governance of the COVID-19 vaccination program in Southeast Asia. Furthermore, the concept of regional governance and systematic literature study methods was used. The results showed that states in southeast asia have done bilateral cooperation with vaccine-producing eventough companies or states. On the scheme of regional governance, ASEAN becomes a fasilitator of vaccine distribution in order to guarantee that ASEAN members get the vaccine.

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INTRODUCTION

Southeast Asia has a fairly dense population. As of 2020, Brunei Darussalam has 437.479 people, Singapore has 5.850.342 people, Laos has 7.275.560 people, Cambodia has 16.718.965 people, Malaysia has 32.365.999 people, and Myanmar has 54.409.800 people. Meanwhile, Thailand has 69.799.978 people, Vietnam has 97.338.579 people, Philippines has 109.581.078 people, Indonesia has 273.523.615 people, and Timor-Leste has 1.318.445 people (Worldometer, 2021). These data showed that Brunei has the least population, while Indonesia ranks first as the country with the most population.

In relation to this population density, Southeast Asia has become an area severely affected by COVID-19. In August 2021, there were 4.181.309 positive cases in Indonesia, 2.304.192 cases in Philippines, 656.129 cases in Vietnam, 1.434.237 cases in Thailand, 438.951 cases in Myanmar,

2.030.935 cases in Malaysia, 102.136 cases in Cambodia, 18.059 cases in Laos, 73.938 cases in Singapore, 4.675 cases in Brunei, and 18.856 cases in Timor Leste (CSIS, 2021). Furthermore, there were 139.919 fatalities cases in Indonesia, 36.018 cases in the Philippines, 16.425 cases in Vietnam, 14.953 cases in Thailand, 16.784 cases in Myanmar, 22.009 cases in Malaysia, 2.078 cases in Cambodia, 16 cases in Laos, 58 cases in Singapore, 23 cases in Brunei, and 102 cases in Timor Leste. These data showed that Laos had the lowest death cases from COVID-19 with a total of 16 fatalities, while the highest number is found in Indonesia with a total of 139,919 fatalities. However, the description of the distribution of Covid-19 cases in each country in the Southeast Asia region cannot be used as a reference to assess the quality of handling a country or region in the face of a pandemic. This is because there are several things that are different from each country, such as: area, total population and population density.

Vaccination is expected to be an effort to reduce or even stop the spread of COVID-19. Most recovering people produce an immune response for some period on protection against reinfection. Many studies have been conducted to analyze the strength of this protection and its duration (WHO, 2020). The immunity of Covid-19 survivors (people who have recovered from Covid-19) can be imitated by developing a Covid-19 vaccine. Generally, the vaccine works by reducing the tendency of severe symptoms when exposed. It also reduces the chance of being hospitalized and the risk of death, as well as increases the population with immunity, therefore, it is difficult to spread (Washington State Departement of Health, 2021).

Each type of vaccine has a different mechanism to create protection, and it provides T-lymphocyte and B-lymphocyte "memory" for the body to remember the mechanism of fighting the virus in the future (NCIRD Division of Viral Diseases, 2021). Furthermore, the data from clinical trials showed that the effectiveness of Pfizer and Moderna vaccines are 95%, while Johnson & Johnson is about 85% in all subgroups. These include race, ethnic minorities, and those with one or more health conditions such as obesity, diabetes, hypertension, and chronic cardiopulmonary disease (UC Davis Health, 2021).

Vaccines also create group immunity or herd immunity, and it can be achieved when a sufficient number of people have been vaccinated to develop protective antibodies against future infections. In contrast to natural methods of infection, they do not cause disease or complications. With the concept of herd immunity, vaccines have proven themselves in the fight against infectious diseases such as smallpox, polio, diphtheria, rubella and many others (MFMER, 2021). It has been estimated that this concept requires around 80-90% of the population to have immunity to COVID-19, either through previous infection or vaccination. Therefore, many experts promote people to get vaccinated (University of Missouri, 2021).

Vaccination programs have been conducted by Southeast Asia countries, and as previously mentioned, the development is an opportunity to fight the COVID-19 pandemic, however, this has various obstacles, including the distribution. Priority access is determined according to the ability to pay and nationality since coordinated global effort is needed to obtain vaccine (Tarigan & Hafandi, 2021). The Economist Intelligence Unit (EIU) estimated that achieving comprehensive vaccination requires various times. Singapore was predicted to reach this goal by early 2022,

while Myanmar, Laos, Cambodia, the Philippines, and Indonesia were likely to need at least 4 years (Strangio, 2021). Of the eleven ASEAN members, four countries that conduct domestic vaccine production programs are Indonesia, Thailand, Singapore, and Vietnam, although, there are still in the pilot phase (mClinica, 2020).

Furthermore, Singapore Changi Airport seeks to become a COVID-19 vaccine distribution center for the Southeast Asia region, by increasing its cold storage capacity, and establishing a task force to oversee the project. The Changi Ready Task Force is a consortium of 18 companies and groups, including the Civil Aviation Authority of Singapore and the operator of the Changi Airports Group. The facilities to develop coordination across industries and streamline the process of delivering COVID-19 vaccines are also improved (Tani, 2020). Meanwhile, other ASEAN member countries generally conduct vaccination programs following the directions from WHO such as creating task forces, and others.

The vaccination program is still ongoing and the procurement is performed on a bilateral basis. Similarly, Indonesia, through the Minister of Health with the Coordinating Minister for Maritime Affairs and Investment, the Minister of Foreign Affairs, and the Minister of SOEs, have made various efforts to access vaccine candidates such as Sinovac, Sinopharm, and Astra Zeneca. The government also has made cooperation with international organizations such as the Coalition for Epidemic Preparedness Innovations (CEPI), Global Alliance for Vaccine and Immunization (GAVI), and COVAX Facility (Dewi, 2021).

Meanwhile, Cambodia purchases more AstraZeneca through the COVAX program and also utilizes aid funds from the United States for the procurement of the Johnson & Johnson vaccine for indigenous peoples in northeastern part of the country (Sekarwati, 2021). Similarly, Brunei, through the Ministry of Health, also procures vaccines bilaterally to meet the vaccination needs (Novakovic, 2021). Based on this explanation, it is interesting to explore more deeply the vaccination program in Southeast Asia in the context of global governance.

The problem formulation is "how is the regional governance of COVID-19 vaccination in Southeast Asia?" Based on this question, this article aims to:

1. Explain the COVID-19 vaccination programs conducted by Southeast Asia countries, and
2. Explain the role of ASEAN as a regional organization in Southeast Asia in the COVID-19 vaccination program.

LITERATURE REVIEW

Regional governance is used to implement collective action at the regional scale, and it is a deliberate efforts by multiple actors to achieve goals in multi-jurisdiction environments (Foster & Barnes, 2012). Furthermore, it involves a complex balancing act to consider a range of contending goals and interests as member countries respond to shared problems and threats (Nesadurai, 2009).

In this article, regional governance is used as a unit of analysis to discuss COVID-19 vaccination in Southeast Asia. It is stated that the motivation for a government to cooperate in the provision and delivery of services includes an explanation of the public interest. This is consistent with the collective benefits and private interest based on the economic or political opportunism of a region's actors. Meanwhile the cooperation agreements in an area generate collective benefits in the form of efficiency and economies of scale in the provision and production of services (Feiock, 2007).

The neo-progressive perspective stated that the consolidation of existing units and the establishment of local governments has significant powers. Furthermore, this power can control land use and development, enhance economic development, reduce inequality, and address social, economic, and environmental externalities (Basolo, 2003).

Theoretically, this article offers a novelty in terms of regional governance in a pandemic, especially in the study of International Relations. However, the role of each country in overcoming the pandemic remains important considering that the priority in handling the pandemic is the citizens of their respective countries. Practically, the novelty that this article offers is a description of regional governance carried out by ASEAN as a regional organization in the Southeast Asian region, especially in terms of procuring a Covid 19 vaccine.

RESEARCH METHODS

This study used secondary data in the form of program reports, journal articles, news from the official web, and videos. The data were then grouped into two themes, namely: COVID-19 vaccination programs in Southeast Asian countries and the role of ASEAN. The thematic analysis was also conducted by coding: vaccine name, production company, Southeast Asia countries, and vaccination program. Furthermore, the validity was performed by comparing data sources repeatedly based on the code compiled.

RESULTS AND DISCUSSIONS

COVID-19 Vaccination Programs in the Southeast Asia Countries

The general description of vaccine distribution in Southeast Asia countries is presented in the following table 1:

Table 1. Vaccine Distribution in Southeast Asia Countries

No	Country	Vaccine	Most Distributed
1	Brunei	Pfizer, Sinopharm, AstraZeneca	AstraZeneca
2	Cambodia	Sinovac, Sputnik V	Sinovac
3	Indonesia	Sinovac, AstraZeneca	Sinovac
4	Laos	Sputnik V, Sinopharm	Sinopharm
5	Malaysia	Pfizer, Sinovac	Pfizer
6	Myanmar	AstraZeneca, Sinovac	AstraZeneca

No	Country	Vaccine	Most Distributed
7	Philippines	Sinovac, AstraZeneca	Sinovac
8	Singapore	Lunar, Pfizer, Moderna, Sinovac	Pfizer
9	Thailand	AstraZeneca, Sinovac	AstraZeneca
10	Vietnam	AstraZeneca, Medigen, Sputnik V	AstraZeneca
11	Timor Leste	AstraZeneca	AstraZeneca

Source: ASEAN Briefing, 2021

Brunei

Brunei has been preparing to implement a vaccination program since August 2020, and a technical committee has been established to study, review and assess the availability of vaccines in the market, and also to ensure safety and the effectiveness. Based on detailed study and evaluation, Brunei has given special permission for three types of vaccines to be used in the country, namely AstraZeneca, Pfizer, and Sinopharm (Wirawan, Brunei Mulai Program Vaksinasi Nasional Covid-19, 2021).

In March 2021, COVAX delivered 24,000 doses of AstraZeneca from Amsterdam through Singapore to Brunei Darussalam. This amount was the first installment of a total of 100,800 doses that are expected to be made available by the end of June 2021, and the Ministry of Health also procures vaccines bilaterally. The COVID-19 Vaccine Technical Committee ensures that all vaccines fulfill safety standards (Novakovic, 2021). Furthermore, the efforts made by the Brunei government in dealing with the pandemic are to increase the operational time of the daily vaccination, and this hastened the establishment of herd immunity (Begawan, 2021). At the end of August 2021, Brunei had 120 new cases per day with a total infected population of 4,675 and 23 deaths (Reuters Covid-19 Tracker, 2021).

Cambodia

Cambodia receives more vaccines from China than AstraZeneca, and according to Prime Minister Hun Sen, western ally countries also took advantage. The people under sixty years were encouraged to be injected with Sinopharm, while those over the age of sixty received AstraZeneca. In the first batch, Cambodia received 324,000 doses of AstraZeneca made in India and supplied through the COVAX vaccine distribution program supported by the World Health Organization. India and China are working on vaccine diplomacy to strengthen their position in the region by donating relief supplies to small, poor countries. The first shipment of 600,000 doses of Sinopharm arrived in Phnom Penh, 7 February 2021 and an additional 400,000 doses arrived in April 2021 (Cindyara, 2021).

Cambodia has used three types of vaccines, namely Sinovac, Sinopharm, and AstraZeneca based on recommendations from WHO. Furthermore, the Government also included Johnson & Johnson vaccine portfolio for its population. The dose recommendation from WHO provides protection against critical conditions and hospitalization due to the Delta and other variants (United Nations Cambodia, 2021).

Indonesia

Covid 19 has also hit Indonesia and not only the health aspect is affected. Finance is one of the vital aspects of a country that must adapt in its management. It is not only the central government that has to adapt, but also the local government. Local governments are required to be more flexible in terms of financing, especially in carrying out the programs and activities that have been prepared (Hanida, Irawan, & Rozi, 2021). The social aspect is also an aspect that is widely studied, especially the issue of social restrictions. In order to prevent the spread of Covid 19, the Indonesian Government implemented the Large-Scale Social Restriction Policy (PSBB). This policy is implemented in its entirety and the local government is the implementer of the policy. However, in its implementation it does not run smoothly. However, the implementation did not run smoothly, such as the implementation of the Large-Scale Social Restriction Policy (PSBB) in Bogor City (Tuti, Murod, & Patrianti, 2020).

Although there are many challenges, efforts to handle Covid 19 must still be pursued by the Indonesian government. One of these efforts is vaccination. The government of Indonesia has started the COVID-19 vaccination program in January 2021, and the stocks are aggressively secured through multilateral diplomacy. The first arrival of 1.1 million doses of AstraZeneca from the COVID-19 Vaccines Global Access Facility (COVAX) on March 8, 2021 was the result of multilateral diplomacy. With the addition of 1.1 million AstraZeneca, the current total vaccine stock has reached nearly 40 million doses (KPCPEN, 2021). Furthermore, this country also participates in collaborative study for COVID-19 vaccines and drug trials, as explained by Retno Marsudi as the Minister of Foreign Affairs. There is at least four bilateral cooperation in vaccine development with China, the United Arab Emirates (UAE), COVAX, and South Korea. Indonesia and China agreed to arrange an important business travel corridor to safely conduct business trips. China is the third country after Indonesia to previously collaborate with the UAE and South Korea. During the meeting, two cooperation agreements were signed between Bio Farma and Sinovac for the supply of 40 million doses of vaccine from November 2020 to March 2021, and Sinovac's priority to supply vaccines to Bio Farma for the period April-December 2021 (Setiawan, 2020).

Indonesia further received an additional 7.5 million doses of the vaccine from multi-producers with bilateral schemes or through dose-share assistance from other countries. The vaccines were 450 thousand doses of AstraZeneca as assistance from the Netherlands in the form of a finished product, and 1.5 million doses of Pfizer with a direct purchase scheme from the government (Bio Farma, 2021). Apart from the two schemes, additional vaccines were received with a bilateral scheme between Bio Farma and producers of Sinovac and AstraZeneca. A total of 5 million doses of Sinovac and 567 thousand doses of AstraZeneca were sent in the form of a finished product, which arrived on August 20, 2021. Therefore, Indonesia had received as many as 22.792. 480 doses of ready-made vaccines from various brands other than Sinovac. These include AstraZeneca, Moderna to Pfizer at the beginning of August 2021 (Bio Farma, 2021). After the arrival of 4 types of vaccines for the government vaccination program and one type for the gotong royong (cooperation) vaccination program, 197.6 million doses have been secured,

consisting of 47.9 million in the form of a finished product, and 144.7 million in bulk form (Bio Farma, 2021).

Laos

The COVID-19 vaccine for Laos came from China and Russia (Sinopharm and Sputnik V). Furthermore, several doses of Sinopharm from China arrived in Vientiane on February 8, 2021, and the Minister of Health, Bounkong Syhavong, and Chinese Ambassador to Laos, Jiang Zaidong, received the vaccines at the airport. According to Syhavong, Laos' ministry of health demands China's vaccines very seriously. This is because the high quality and efficiency help to protect frontline healthcare workers and public officials (Wirawan, Tiongkok Sumbang Vaksin Covid-19 Sinopharm ke Laos, 2021).

Malaysia

Malaysia gave conditional approval to use AstraZeneca from UK and Sinovac from China, and by early 2021, 32 million doses of Pfizer and Sinovac had been received. The approval was issued days after the launching of the national COVID-19 inoculation program on February 2, 2021. The vaccination started on February 24 using Pfizer and BioNTech to reduce the spike in cases and help the economic recovery (CNN Indonesia, 2021). The following is a strategy used by Malaysia in procuring a COVID-19 vaccine:

Table 2. Timeline for Malaysia's Vaccine Acquisition

No	Date	Description
1	December 2019	COVID-19 was detected
2	January 2020	<ul style="list-style-type: none"> China distributed the genetic code for COVID-19 Vaccine development commenced globally
3	April 2020	<ul style="list-style-type: none"> Science diplomacy approach was 142mmunizat by MOH-MOSTI-MFA Science diplomacy was carried out with countries & vaccine manufacturers as well as global alliances and bodies for immunization & health
4	April-October 2020	<p>Bilateral Negotiation</p> <ul style="list-style-type: none"> Countries that develop vaccines (China, USA, Russia, United Kingdom, etc.) 12 vaccine manufacturing companies <p>Multilateral Negotiations</p> <ul style="list-style-type: none"> COVID-19 Vaccine Facility Global Access (COVAX) Coalition for Epidemic Preparedness Innovation (CEPI)
5	14 October 2020	<ul style="list-style-type: none"> The establishment of the Special Committee for Ensuring Access to COVID-19 Vaccine Supply (JKJAV)
6	December 2020	<ul style="list-style-type: none"> Prime Minister announced that Malaysia has gained access to vaccines for 82.8% population of Malaysia Evaluation & conditional approval by the National Pharmaceutical Regulatory Division (NPRA) & Drug

No	Date	Description
		Control Authority (DCA). Pfizer has obtained conditional approval
7	5 January 2021	○ The Public Accounts Committee was satisfied with the COVID-19 national vaccine procurement strategy
8	February 2021	○ Malaysia receives the first vaccine
9	February 2021-2022	○ Fill and finish term sheet agreements signed with Malaysian vaccine manufacturers ○ Implementation of the National COVID-19 Immunization Program

Source JKJAV, 2021

The table 2 shows the strategy of Malaysia in procuring the COVID-19 vaccines, starting from the case detection in December 2019 to bilateral and multilateral diplomatic steps. The government had created a special committee named The Special Committee on COVID-19 Vaccine Supply (JKAV) to conduct a national immunization program against the pandemic such as ensuring timely access to vaccine supplies for domestic needs. The committee is under the auspices of the Minister of Health and the Minister of Science, Technology, and Innovation (JKJAV, 2021). The following is the vaccine data of Malaysia in February 2021:

Table 3. Supply of COVID-19 Vaccines Acquired by Malaysia

Vaccine	Pfizer	AstraZeneca (Including COVAX Facility purchases)	Sinovac	CanSino Biologics	Sputnik V
Type of Vaccines	mRNA	Viral Vector	Inactivated virus	Viral Vector	Viral Vector
Manufacturer's Country	United States of America	United Kingdom	China	China	Russia
Number of doses	2	2	2	1	2
Efficacy	95%	62% - 90%	50.4% - 91.25%	65.7%	91.6%
Storage Temperature	-75°C	2-8°C	2-8°C	2-8°C	-20°C
Number of doses (Million)	32	12.8	12	3.5	6.4
% of Populations	50%	20%	18.75%	10.9%	10%
Countries that have used the vaccine	United States of America, Singapore, UK, Bahrain,	UK, South Africa, Ukraine, Brazil, the European Union, Canada, India	China, Indonesia, Turkey, Chile, Hong Kong,	China; Mexico; Pakistan	Russia, Argentina, Brazil, South Korea, Belarus

Vaccine	Pfizer	AstraZeneca (Including COVAX Facility purchases)	Sinovac	CanSino Biologics	Sputnik V
	Canada, Mexico, Switzerland, the European Union		Brazil, Cambodia		

****The vaccine supply is subject to periodic negotiations***

****This information is valid as of 16 February 2021 and will be updated from time to time***

Source JKJAV, 2021

The data showed that the total dose of 66.7 million covers 109.65% of the one already acquired by Malaysia. In this case, Pfizer from America has the largest dose of 32 million, covering 50% of the population.

Myanmar

Myanmar launched its vaccination program on 27 January 2021, where health workers and medical volunteers received the first dose of AstraZeneca from the donation of India. A total of 1.5 million doses of vaccine produced by the Serum Institute of India were received, amid New Delhi's efforts to conduct diplomacy against neighboring countries such as its regional rival, China. The ministry of health stated that up to 30 million additional doses of AstraZeneca were ordered and another 2 million were obtained in the first week of February 2021. Besides, the minister of foreign affairs of China, Wang Yi, promised 300,000 doses of the Chinese-made vaccine (Reuters, 2021). The government of China has handed over more than 500,000 COVID-19 vaccines to the Myanmar military junta regime. It was donated by the Chinese People's Liberation Army (PLA) and arrived in Yangon on May 2, 2021. The Chinese Embassy in Yangon announced that the donation showed Paukphaw's "friendship", or the relationship between China and Myanmar (CNBC Indonesia, 2021). However, political tensions have made it difficult to implement the vaccination program. As of September 2021, only 3% of the population were fully vaccinated, however the Junta has received millions of donated doses from India, China, and Russia. The vaccination target set by Junta leader, Min Aung Hlaing, is 50 million of the total population by the end of 2021 (Walker, 2021)

Philippines

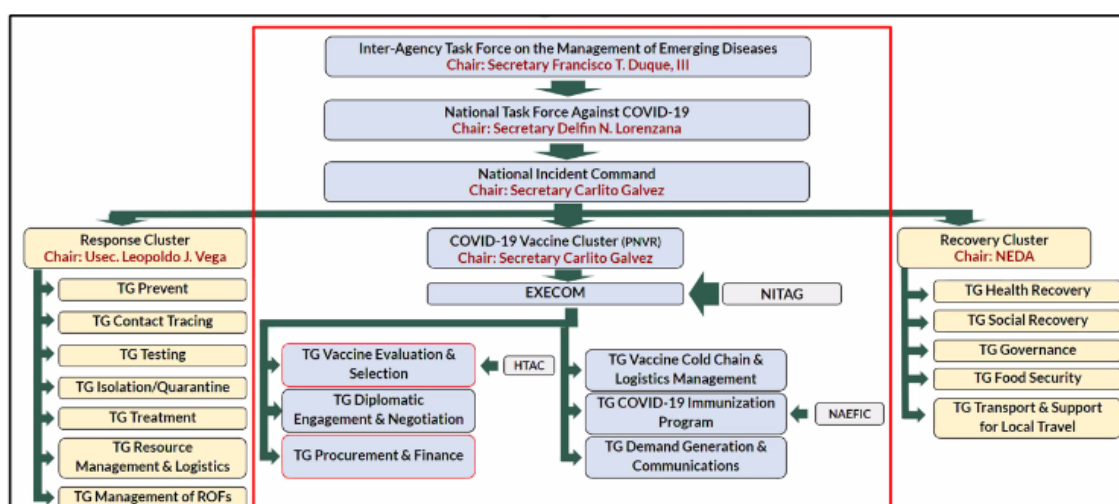
The Philippines started its COVID-19 vaccine program on March 1, 2021 with the Sinovac from the donation of China, as the only source at that time, and this diplomacy resulted in 525,600 doses of AstraZeneca (Pramudyani, 2021). On May 20, 2021, the Philippines further received 500,000 doses of Sinovac at Ninoy Aquino International Airport. With these additional doses, 5.5 million doses of Sinovac were already secured, 1 million of which was donated by the Chinese government. Sinovac is one of four vaccines used by the Philippine government in its national

vaccination. In addition to Sinovac, AstraZeneca, Sputnik V, and Pfizer-BioNTech were also used (Idrus, 2021).

The diplomatic strategy conducted by the Philippines in obtaining a COVID-19 vaccine is through the Department of Foreign Affairs (DFA). This was conducted by supervising the involvement of foreign governments, pharmaceutical companies, and other related entities in the development, evaluation, as well as selection of vaccines for procurement and clinical trials. This ensures public accessibility towards COVID-19 Vaccines (NDVP, 2021) since they are facilitated by a program called The Philippine National Deployment and Vaccination Plan for COVID-19 Vaccines (NDVP). This program was developed by the Government under the leadership of President Rodrigo Roa Duterte, and under the guidance of Minister of Health, Francisco T. Duque III, and Chairman of the COVID-19 Vaccine Group, Secretary Carlito G. Galvez Jr.

Besides bilateral negotiations, the Philippines also pursue multilateral cooperation through the COVID-19 Vaccine Global Access Facility (COVAX) to ensure the country's access for its 20 million citizens. The organizational structure used by the Philippines in dealing with COVID-19 is as follows:

Table 4. COVID-19 Vaccine Cluster Organizational Structure



Source: NDVP, 2021

Based on the organizational structure, the Ministry of Foreign Affairs in the TG Diplomatic Engagement & Negotiation section is responsible for the procurement of COVID-19 vaccines obtained from abroad.

Singapore

In December 2020, it was confirmed that Singapore was ready to become a COVID-19 vaccine distribution center in the Southeast Asia region, especially from Europe to Southeast and the Southwest Pacific. It can play a role to areas with limited infrastructure to handle large quantities of COVID-19 vaccine. Pfizer and Moderna were stored at minus 70 and 20 degrees Celsius, respectively. Singapore's air connectivity and ability to keep shipments at low temperatures

have put the country in a good position as a temporary vaccine repository (CNN Indonesia, 2020). The country probably use vaccines from anywhere as long as they are safe and effective against the COVID-19 pandemic. Prime Minister, Lee Hsien Loong, stated that there will be no discrimination against vaccines based on the producing country. The vaccines that were received and passed clinical trials were Pfizer and Moderna. Meanwhile, Sinovac is still in the evaluation stage (Ericssen, 2021), and one of the COVID-19 vaccine manufacturers, BioNTech, plans to build its Southeast Asian headquarters and manufacturing site in Singapore to produce hundreds of millions of mRNA-based vaccines per year. The production site will be the German company's first mRNA manufacturing facility outside Europe with an estimated capacity of several hundred million doses of the vaccine (Asia Times, 2021).

Thailand

The mass vaccination strategy in Thailand is based on the inoculation of AstraZeneca, which is produced locally from June for regional distribution with a total of 61 million doses. This follows the government's production agreement with a British-Swedish pharmaceutical company to produce COVID-19 vaccine. With the help of local drugmaker, Siam Bioscience, approximately 200 million doses of AstraZeneca will be manufactured between mid-2021 and mid-2022. About a third of these doses have been reserved with the remainder destined for export to Indonesia, the Philippines, Vietnam, and other neighboring countries (Peter, 2021).

Furthermore, about 200.000 doses of Sinovac were ordered from China for medical workers and high-risk groups, and the next 800.000 doses arrived on March 20, 2021. However, the country briefly suspended the use of AstraZeneca after Ireland, Denmark, Norway, Iceland, and the Netherlands suspended it due to reports of side effects of blood clots in some people. Prime Minister, Prayuth Chan-Ocha, became the first person in Thailand to be vaccinated against AstraZeneca on March 16, 2021 (Bestari, 2021).

The procurement of vaccines is the result of strategic foreign policy and proactive diplomacy with strategic partners and close allies. This is an initiative led by the Deputy Prime Minister and Minister of Foreign Affairs and the result of close collaboration between the Ministry of Foreign Affairs and Public Health. Furthermore Thailand is also taking advantage of the close and longstanding friendship dating back more than 400 years and the close cooperation in all dimensions between Thailand and the UK (OCHA, 2021).

Vietnam

The government stated that Vietnam will receive 150 million doses of the COVID-19 vaccine through the COVAX scheme. The first batch of 117.600 doses of AstraZeneca arrived at the end of February 2021. Meanwhile, plans were also made to purchase Pfizer, Moderna, Johnson & Johnson and produce Russia's Sputnik V vaccine. The country is also developing a coronavirus vaccine managed by a local company, Nano Covax, which is targeted to be available in early 2022 (CNN Indonesia, 2021).

Nano Covax is a domestically produced COVID-19 vaccine by JSC's Nanogen Pharmaceutical Biotechnology, and it will be in its third phase of trials in July 2021. The trial is ongoing at the Military Medical University and Pasteur Institute of Ho Chi Minh City and in Hung Yen, Long An and Tien Giang Provinces. The other domestic vaccine is COVIVAC, produced by the Nha Trang Institute of Vaccines and Medical Biologicals (IVAC), and the clinical trials will be conducted in July 2021. Meanwhile, the second phase is scheduled to take place in Thai Binh province (Chinh, 2021).

Australia delivered more than 400.000 doses of the vaccine to Vietnam in August 2021, as part of its ongoing commitment to cooperation between the two countries, and this is an additional \$40 million vaccine-related support package. Australia is partnering with UNICEF to obtain additional doses to support the COVID-19 response in Vietnam and is providing funding for syringes, training of health workers, refrigerators, and support for vaccine launches in remote provinces (Reliefweb, 2021).

Timor Leste

The first batch of COVID-19 vaccines with a total of 24.000 doses arrived in Timor Leste on April 4, 2021, and they were transported to Dili on flights chartered by UNICEF. Vaccine distribution was made by My Indo Airlines, which is a cargo transportation company based in Jakarta (Tatoli, 2021). Furthermore, AstraZeneca was used because it is considered the most appropriate for the country. It can be preserved by refrigeration, with a temperature of between 2 and 8 degrees Celsius.

In addition, a batch of 52,850 AstraZeneca vaccine supplies from Australia were received on July 14, 2021 making it the seventh shipment, with a total of 227.580 doses (Government of Timor Leste, 2021). Besides vaccines from Australia, there is a supply of 124.800 doses of AstraZeneca from the COVAX mechanism and 100.000 doses of Sinovac from China. Therefore, a total of 451.580 doses are available in Timor Leste as an effort to deal with COVID-19 (Government of Timor Leste, 2021).

Four countries in ASEAN produce COVID-19 vaccines as presented in the following table 5:

Table 5. ASEAN Member Countries that Produce COVID-19 Vaccines

Country	Vaccine Development	Target Timeline
Indonesia	Lab work completed	Early 2021
	Large scale trials	Second half of 2021
Singapore	Phase I/II trial result (-100 person)	Oct/Nov 2020
	Phase III start (incl. overseas)	End 2020
Thailand	Large scale human trial start (5.000 people)	Nov 2020
	Vaccine ready for use	Late 2021
Vietnam	Animal trials	Early 2021

Source: mClinica, 2020

ASEAN's Role

ASEAN has great potential to ensure equitable distribution of vaccines, and this is consistent with the collective efforts of member countries to encourage inclusive and community-centered organizations following the agreed Sustainable Development Goals (SDGs). A regional approach should be taken by ASEAN, considering that COVAX has not yet provided a COVID-19 vaccine to low- and middle-income countries. This is because the limited stock was obtained from the donations of developed countries. The highest and lowest income countries control 80% and 10% of the world's vaccines respectively (Nigam, 2021). Therefore, ASEAN members cannot rely on donations or vaccines obtained at low prices through the COVAX scheme. However, the organization urgently needs to produce its vaccine with international assistance such as through technology and knowledge transfer (Tarigan & Hafandi, 2021).

The role of ASEAN in the COVID-19 vaccination program is to become a bridge for the procurement of vaccines evenly sourced from other countries. For example, the U.S.-ASEAN Health Futures Initiative program to support a regional approach to public health focuses on three core areas: research, health system capacity and resilience, and training for ASEAN public health professionals. Furthermore, USAID (United States Agency for International Development) works with the ASEAN Secretariat to develop the ASEAN Public Health Emergency Coordination System (APHECS). APHECS improves efficiency across existing public health emergency response mechanisms to enable a coordinated and gender-sensitive regional response to future public health crises. The US Center for Disease Control and Prevention established the US-ASEAN Infection Prevention and Control Task Force (US Departement of State, 2021).

There are also 32 million doses of vaccine obtained through the GAVI COVAX facility by the ASEAN. Half of the vaccines were as a result of donations from the European Union. More detailed data is displayed in the following table 6:

Table 6. Vaccine Doses in ASEAN

Country	Total	Q1	Q2
ASEAN	32.310.600	6.872.640	14.909.199
Myanmar	4.224.000	1.689.600	2.534.400
Laos	564.000	225.600	338.400
Vietnam	4.886.400	732.960	2.052.288
Cambodia	1.296.000	518.400	777.600
Philippines	5.617.800	942.120	2.310.336
Brunei	100.800	15.120	42.336
Indonesia	13.708.800	2.056.320	5.757.696
Singapore	288.000	43.200	120.960
Malaysia	1.624.800	649.920	874.880

Source: Delegation of the European Union to ASEAN, 2021

ASEAN has attempted to use its existing cooperative structures as a basis for organizing a pandemic response among national governments in this regional context of hardening nation-state borders (Djalante, et al., 2020). In general, through a collaborative effort initiative, the ASEAN Health Cooperation on Epidemic Preparedness played a critical role in handling the COVID-19 pandemic response in the area. However, Evidence showed, that ASEAN members lacked cohesion in their use of existing regional health structures to build a coordinated pandemic response (Cardenas, 2021). ASEAN continues to struggle to come up with a coordinated response to public health crises during outbreaks, particularly in terms of assistance for the poor and vulnerable.

CONCLUSIONS

The population of Southeast Asia is quite dense, making the region exposed to the spread of COVID-19 by taking quite a number of victims for the number of positive cases and deaths. Every country in the Southeast Asia region is trying to handle the best possible spread of Covid 19 in their respective countries so that their citizens can be safe. Vaccination is considered an effort to reduce the impact of COVID-19. Every country in the Southeast Asian region seeks to provide a Covid 19 vaccine by collaborating with vaccine producing countries. However, the Covid 19 vaccine is still limited in development and quantity, so vaccine shortages may occur and there are concerns that not all communities or countries will get the Covid 19 vaccine. countries and people have the same rights to get the Covid 19 vaccine. As a regional organization in the Southeast Asian region, ASEAN acts as a bridge or facilitator of a fair distribution of vaccines to all Southeast Asian countries by conducting a series of programs to public health that focuses on three core areas: research, health system capacity and resilience, and training for ASEAN public health professionals.

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