Centre for Non-Traditional Security Studies

Year In Review 2021

RSiS S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES
Nanyang Technological University, Singapore

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

CENTRE FOR NON-TRADITIONAL SECURITY STUDIES
YEAR IN REVIEW 2021

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Contents

Message from the Executive Deputy Chairman, S Rajaratnam School of International Studies (RSIS)

Dear Readers,

Non-Traditional Security (NTS) challenges continue to threaten the well-being of all of us. The need to build resilience in our communities and nations has never been greater.

This year, we have witnessed the continued ferocity of the Coronavirus Disease 2019 (COVID-19) and its numerous variants. Even as vaccines are being rolled out, the world is still suffering from the horrendous impact of the deadly pandemic. The multifaceted effects of COVID-19 have aggravated existing socio-economic inequalities, generating new vulnerabilities, and escalating levels of risk everywhere.

Against this backdrop, other NTS threats, ranging from climate change and natural disasters to mass movement of people in search of refuge and safety, loom as huge challenges faced by populations across the globe.

This underscores the need to address transnational security issues with a whole-of-society and global approach. State and non-state actors need to work together, be resilient and innovative, in addressing and managing the ever-complex and transboundary harms to the world as we know it.

In this NTS Year In Review 2021 from the RSIS Centre for Non-Traditional Security Studies (NTS Centre), our scholars and researchers have written a series of insightful articles on a range of topics, based on their analyses covering climate insecurity, food insecurity, irregular migration, nuclear security, humanitarian assistance and disaster relief, and communicable disease/public health crisis. It is our hope that this Review will be useful to our readers in understanding the risks, and preparing the appropriate responses associated with NTS threats.

RSIS is proud to be at the forefront of research in the area of non-traditional security. Looking ahead, the NTS Centre will remain active on policy-oriented research – focusing on Sustainable Security and Crisis Management. There are many creative processes and systems being developed as like-minded peoples tap into human ingenuity, science and technology to sustain Mother Earth. As usual, we welcome your feedback on what RSIS and its NTS Centre are doing.

Ong Keng Yong
Executive Deputy Chairman
S. Rajaratnam School of International Studies (RSIS)
Nanyang Technological University, Singapore

Message from the Head of Centre for Non-Traditional Security Studies

Dear Readers,

2021 was very much like 2020—with national lockdowns, travel restrictions, and border closures. While we see light at the end of the tunnel with the rapid production and roll out of COVID-19 vaccines, the situation remains grim. COVID-19 has indeed been the crisis of a generation, resulting in an inordinate number of lives lost and a huge economic fallout.

Apart from the pandemic, there are also other non-traditional security threats that imperil the security of populations and nations. Natural hazards have resulted in destruction of property, loss of lives, and financial losses, while climate change has severely impacted food security and created irregular migration patterns.

This makes the task of dealing with the multidimensional consequences of such threats as urgent as it is complex and challenging. Against these perennial challenges and the emergence of new types of disruptions, the concern about resilience – particularly for vulnerable communities that are struggling to bounce back and/or adapt after a disaster – has become even more critical.

Stakeholders across different sectors – including but not limited to governments, civil society, private sector, academia - must work together to build capacity, mobilise resources, and share expertise. This will help the region cope with the complexities of addressing the pandemic and other NTS challenges.

The NTS Year in Review 2021 comprises articles which discuss NTS challenges currently confronting the region. These articles draw out some of the potential pathways to addressing such issues. We hope that you will find these articles useful in providing a holistic understanding of the kinds of threats we face today.

Finally, the NTS Centre will continue to conduct policy-relevant research on emerging NTS issues and their regional implications. We value any feedback and look forward to any potential engagements on our research areas.

Professor Mely Caballero-Anthony
Head
Centre for Non-Traditional Security (NTS) Studies
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Key NTS Events 2021

January

Indonesia's "exemption of placement fee policy" for workers in 10 job sectors including domestic workers and caregivers came into effect in January 2021. Passed in July 2020, this policy transfers the burden of paying placement fees from the workers to their employers in an effort to avoid overcharging. This policy is part of a 2017 law on migrant worker protection.

*

On 14 and 15 January, a 5.9 magnitude earthquake, followed by another 6.2 magnitude earthquake struck Sulawesi in Indonesia. The nearby cities of Mamuju and Majene were particularly affected with hundreds of people injured, thousands displaced and many buildings damaged.

February

On 1 February, the Myanmar military seized control of the country after a general election in which Daw Aung San Suu Kyi's National League for Democracy (NLD) party won by a landslide. Protests have rocked the country since the coup, while ousted NLD MPs convened a shadow government.

*

The Singapore government unveiled the Singapore Green Plan 2030 on 10 February. Spearheaded by the Ministry of Education, the Ministry of National Development, the Ministry of Sustainability and the Environment, the Ministry of Trade and Industry and the Ministry of Transport, this plan is a "whole-of-nation movement" to advance the national agenda on sustainable development.

March

China unveiled its five-year plan which will be the blueprint for the country's short-term development. This roadmap contains benchmarks on its way to attain the country's ambitious climate agenda to become carbon neutral by 2060.

*

On 30 March, the World Health Organization published its 300-page report on the origins of the COVID-19 virus. This report was based on findings from 34 scientists from several countries, including China, Japan, the United States and the United Kingdom, who gathered in Wuhan in January and February 2021.

July

The International Atomic Energy Agency (IAEA) and Japan agreed on the scope of technical assistance the Agency will provide in monitoring and reviewing the planned discharge of treated water stored at the crippled Fukushima Daiichi Nuclear Power Station.

*

Heavy floods swept across western Europe affecting countries such as France, Germany, Belgium and the Netherlands in July. These floods have killed over a hundred people with entire villages devastated.

August

Released on 9 August, a report by the Intergovernmental Panel on Climate Change warned that human activity is changing the climate in unprecedented and irreversible ways with increasingly extreme heatwaves, flooding and a key temperature limit being broken in just over a decade if countries continue on their current path.

*

Guinea reported a confirmed death from Marburg virus disease, the first known case in the country as well as West Africa.

September

Researchers at the University of California San Diego have created new technology that can be used for controlling mosquitoes. This technology alters genes related to male fertility and female flight in the species of mosquitoes responsible for spreading diseases such as Dengue and Zika.

*

The 76th session of the United Nations General Assembly (UNGA) opened on 14 September. Topics of discussion included climate change and the humanitarian crisis rapidly unfolding in Afghanistan.

April

The Leaders Summit on Climate was held on 22 and 23 April. World leaders who attended the summit included Mr Lee Hsien Loong of Singapore and Mr Joko Widodo of Indonesia.

*

Indonesia's state-owned steelmaker, Krakatau Steel, signed a deal with energy company, Akuo Energy Indonesia, to build a 40 MW floating solar power station on a water reservoir as part of the country's aim of increasing its use of green energy.

May

The Australian federal government announced it will create the National Recovery and Resilience Agency (NRRA) to both provide relief to communities and advise it on how to mitigate the impacts of future weather events. The creation of such an agency was one of the recommendations of a royal commission that emerged as a result of the bushfires disaster.

*

The WHO announced the COVID-19 variant detected in India is of 'global concern'. Later known as the 'Delta' variant, this has driven spikes in infections around the world.

June

The G7 countries pledged to donate 1 billion doses of COVID-19 vaccines to poorer countries at the end of the G7 summit, committing to vaccinate the world by the end of 2022.

*

The AHA Centre and the local administration of Palu City in Central Sulawesi, Indonesia, officially launched the ASEAN Village on 23 June. Consisting of 100 permanent houses, one mosque and one auxiliary health centre, this village was funded by ASEAN Member States and dialogue partners as part of the recovery programme after the disasters in September 2018.

October

This year's Nobel Prize in physics was awarded to three climate scientists. One of the laureates, Syukuro Manabe, was among the first to show that pumping carbon dioxide into the atmosphere would raise earth's surface temperature. He shared his award with Professor Klaus Hasselmann, whose work laid the foundations for future climate models and global warming projections. The other half of the Nobel Prize in physics went to Dr Giorgio Parisi whose work on the interplay of disorder and fluctuations in physical systems helped climate scientists in their work.

*

ASEAN has announced that the leader of the military junta will not be invited for ASEAN Summit and Related Meetings on 26 – 28 October. Instead, they will be inviting a non-political representative from the country.

November

The COP26 UN Climate Change Conference, hosted by the UK in partnership with Italy, took place from 31 October to 12 November in Glasgow, Scotland, UK. World leaders and delegates outlined national commitments to accelerate action on climate change and pledged ambitious cuts in their countries' emissions, all in an effort to limit global temperature rises.

*

On 11 November, the United States and China announced at COP26 a surprising bilateral agreement to cooperate on climate change, signalling a desire to set it aside from other prickly disputes. They will create a working group to deal with climate change in the short term and pledged to meet regularly to address the crisis.

December

On 2 December, Gavi decided to fund malaria vaccination in sub-Saharan Africa, providing an initial investment of $155.7 million between 2022 and 2025. The decision is historic as the malaria vaccine roll-out will be the first of its kind in the endemic countries. Experts estimate that the vaccination programme will save an additional of 40,000 to 80,000 children from the disease in Africa each year.

*

Indonesia's Mount Semeru volcano on the island of Java erupted on 4 December. The eruption killed at least 34 people and forced thousands to flee.

*

As of 5 December, the COVID-19 Omicron variant has been reported by 45 countries. The spike in Omicron variant cases has led to the concern of many people that governments will re-impose lock-downs and travel restrictions, which will disrupt the forthcoming holidays.

COP26: Non-Traditional Security Issues and Commitments

Held in Glasgow, the United Kingdom from 31 October to 12 November, COP26 presented an opportunity for the world to make stronger commitments and take urgent actions to end the fossil fuel era and commence regenerating nature. As both developing and developed nations look to rebuild their economies in the wake of COVID-19 and amidst worsening impacts of climate change, there has been an emphasis on 'building back better' through a green recovery. What were the NTS-related issues, commitments and challenges highlighted in COP26?

Planetary Health

World leaders gathered at COP26 in Glasgow made a commitment to end deforestation by 2030. The new multibillion-dollar pledge in the climate summit manifests a renewed and stronger interest in nature-based solutions. The care of nature has indeed come into sharper focus in recent years. It is perceived to offer more holistic solutions to multiple environmental issues such as triple planetary crisis of pollution, biodiversity loss, and climate change. A greater emphasis on nature protection and conservation potentially contributes to reversing attendant consequences of environmental degradation such as the current pandemic thereby creating a more resilient world post-COVID-19.

Food Security

Food systems can be significant contributors and beneficiaries of the "net-zero" carbon emission targets at COP26, if these targets hasten the pace of agricultural transformation to produce more food with fewer agricultural inputs. However, careful planning is required to ensure that the process of shifting to renewable energy sources is as frictionless as possible as far as food security is concerned. For instance, fertilizers, which currently count among the tools for boosting farming yields, are linked to energy prices. Yet, too abrupt a clamp down on coal mining can exacerbate the current "coal crunch" of skyrocketing energy prices, leading to potentially higher fertilizer costs for farmers, and higher food prices for poorer consumers. Coordination is key.

Humanitarian Assistance and Disaster Relief

In 2020, climate-induced disasters caused an estimated $250 billion in damage globally. Current levels of humanitarian funding are less than one tenth of that. Developing countries and civil society groups at COP26 in Glasgow called for designated funding pools resourced by public and private finance in developed countries to cope with climate change. In October ahead of COP26, the ASEAN Disaster Resilience Outlook was launched and identifies disaster risk financing mechanisms and pathways forward for a more resilient and prosperous region. Commitments made at COP26 will need to turn into action for the Asia-Pacific to be ready for the new climate realities.

Nuclear Power and Technology

The COP26 featured substantial discussions on how nuclear power and technology can help tackle climate change. The peaceful use of nuclear science and technology was strongly represented and articulated through the events organised by the International Atomic Energy Agency (IAEA) at COP26. Nuclear technology was promoted as "an indispensable tool" for achieving a Net Zero World and boosting climate change adaptation measures. The IAEA Director General Rafael Mariano Grossi said it should have a "seat at the table" at climate change discussions.

Women and gender rights

The issue or rather the urgency of incorporating a women and gender angle in climate change was made clear in the recent "Gender and COP 26" events, running concurrently to main discussions. These included debates on gender and climate justice, the role of national climate action plans in ensuring climate justice for women and the role of women in innovation and technology in mitigation measures.

Women's rights and their voices must be embedded in all processes of the United Nations Framework Convention on Climate Change (UNFCCC) framework if there is to be any kind of universal solution to climate change. The importance of the role of women is reflected in the presence of the Women and Gender Constituency (WGC), one of the nine key stakeholders of the UNFCCC. The WGC represents and articulates millions of voices of women so as to ensure that women rights and gender justice are crucial elements in the fight against climate change.

Migration

At COP26, the link between climate change and migration was discussed prominently. During the address of Mr Antonio Vitorino, Director-General for the International Organization for Migration (IOM), he emphasised that over 200 million people could become climate migrants by 2050. The importance of adaptation efforts and sustainable finance was also highlighted as key factors in building resilience among communities. The IOM and Lancet Migration, along with the World Health Organization, also called upon world leaders during the conference to acknowledge the linkages between climate change, health and migration, and to urgently include migrant health as a component of climate change policies.

World Meteorological Organization
Photo Credit: WMO via Flickr, under Creative Commons license

Human Security Imperiled: Charting the Long Road to Recovery in Post-COVID world

Mely Caballero-Anthony

We ushered in 2021 scarred by the devastating impact of the COVID-19 pandemic had in 2020 that cost millions of lives worldwide and resulted in a severe global economic recession. While we see light at the end of the tunnel with the rapid production and roll out of COVID-19 vaccines, the situation remains grim. We started 2021 much like in 2020 – with lockdowns and border closures.

COVID-19 has indeed been the crisis of a generation. This makes the task of dealing with its severe and multidimensional consequences no less urgent as it is complex and challenging. Setting the agenda for recovery would first require a comprehensive account of the extent that COVID-19 has imperiled human security. One year since the pandemic outbreak, COVID-19 continues to rage, exacting a high toll on human life. As of 1 November 2021, there have been more than 247 million COVID-19 cases globally, with over 5 million deaths. These numbers are expected to grow as countries around the world grapple to contain the pandemic.

Counting the Socioeconomic Cost

The economic impact of the pandemic has been devastating, with deep and long-lasting consequences. According to the International Labour Organization (ILO), COVID-19 wiped out 81 million jobs in the Asia-Pacific, resulting in more people becoming impoverished. The World Bank reported a rise in global

COVID-19 vaccination in the Philippines
Photo Credit: Asian Development Bank via Flickr, under Creative Commons licence

Vaccine access facility in the Philippines
Photo Credit: Asian Development Bank via Flickr, under Creative Commons license

poverty in 2020, with 115 million more people falling into extreme poverty and is expected to grow 150 million in 2021. The severe economic downturn has also resulted in an increase in the number of people becoming food insecure. The Food and Agriculture Organization's (FAO) State of Food Security and Nutrition in the World 2021 projected that between 720 and 811 million people in the world faced hunger in 2020. Around 118 million more people were facing hunger in 2020 than in 2019.

Impact on Human Security and Human Development

COVID-19 has raised critical questions about the prospects for human security and human development and achieving the Sustainable Development Goals (SDGs) by 2030. The Social Progress Index indicates that unless the impact of COVID-19 is mitigated, the realisation of SDGs will be pushed back more than 50 years to 2082. Aside from seriously setting back the SDGs of poverty reduction and zero hunger, the pandemic has further widened social and economic inequalities, created an education crisis, and hit the most vulnerable groups hardest – the poor, women, the youth, and the ethnic minorities. The United Nations Children's Fund (UNICEF) found that a third of the world's school children – 463 million globally – were affected when the pandemic forced school closures and where remote learning was not possible.

Recovery therefore is going to be particularly difficult given the enormity of the challenges ahead. Although economic projections for 2021 reflect a rebound for Asia, much of positive forecasts put a lot of weight on the production and rollout of vaccines. Yet, many developing countries in Asia, including Southeast Asia, have been disadvantaged by the ability of richer countries to reserve most of the initial supply of vaccines. This further aggravates inequality and further widens the gulf between rich and poor societies.

Fair Access to Vaccines

The UN Secretary General Antonio Guterres called for global solidary to ensure fair access to safe and effective vaccines for everyone, stressing that "no one is safe until all are safe". He also urged the international community to turn the global crisis into an opportunity to transform the world, build back better, and speed up the transition to green energy while growing economies particularly those of developing countries. He further implored richer countries to help poorer ones that are severely affected by COVID -19 and the economic recession.

Indeed, while challenges persist in advancing global solidarity, the significance of regional cooperation cannot be ignored. In Asia, regional cooperation matters – providing the critical pathways in promoting international and multilateral cooperation. ASEAN and the ASEAN-led institutions like the ASEAN Plus Three and the East Asia Summit have proved to be important platforms in filling in the gaps in global health governance and helped build state capacity in containing the pandemic. Moving forward, regional cooperation will become even more crucial in dealing with the difficult tasks of economic recovery while ensuring a safer and more resilient environment.

Vaccine Resilience: Next Stage in ASEAN's War?

Jose Ma. Luis Montesclaros

For many countries, the timing for re-opening borders and re-energising economies in the COVID-19 era depends crucially on fully vaccinating all (or at least two-thirds) their populations, to achieve a semblance of "herd-immunity".

The ASEAN region, with its population of 676 million, needs 1.35 billion doses for full inoculation (assuming two doses per person), and has secured commitments to receive 1 billion vaccine doses sufficient to fully vaccinate 4 out of 5 ASEAN Nationals (80 percent) based on the UNICEF's COVID-19 Vaccine Dashboard.

The question of timing is relevant, however, when one considers that compared to this commitment, only 532 million doses have been delivered as of the start of the last quarter of 2021, sufficient to vaccinate roughly 2 out of 5 ASEAN nationals (39 percent). This is more than double the total vaccine deliveries of 252 million doses on 2 August 2021, but it is still less than half of the committed doses.

Vaccine Hauling: Not ASEAN's Fight

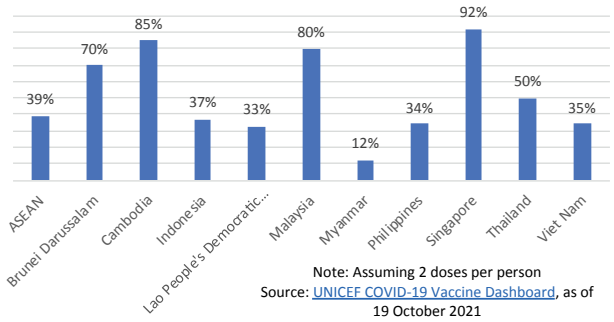
Adding salt to injury, the current COVID-19 situation in the region has been significantly worsening. In 2021, most regional countries saw their highest levels of active cases of COVID-19– perhaps too many for their healthcare capacity to handle. With further deaths impending, the need to draw more vaccines, in order to speed up the process towards "herd-immunity" for the region, was never more urgent.

The obvious challenge is that there are global capacity limitations to vaccine supplies. In early October, 7.6 billion doses of COVID-19 vaccines were manufactured and shipped globally, which means inoculating 3.8 billion people or close to half of the world population (48 percent). Thus, vaccine supplies are still far off the mark of achieving "herd-immunity" at the global level.

The ideal, for parity in equitable vaccine access, is that all countries globally would have vaccines equivalent to the same share (48 percent) of their country's population. Compared to the ideal that ASEAN has vaccines sufficient to inoculate 48 percent of population, the region is doing poorly as its vaccine deliveries are only enough for 39 percent of its population.

Arguably, higher-income ASEAN countries like Singapore can secure vaccines faster, achieving at least 85 percent full vaccination. In contrast, for most ASEAN countries which are of either low- or middle-income status, hauling in more vaccines by bidding higher prices is not the kind of fight they can win (Figure 1), with the exception of Cambodia which secured 21 million doses of Sinovac.

Figure 1: Vaccine Supplies as Percent of Population



Note: Assuming 2 doses per person
Source: UNICEF COVID-19 Vaccine Dashboard, as of 19 October 2021

Intellectual Property Rights: A Fight No One Wins

This reality check logically directs our attention away from the scramble to getting a bigger share of the pie, and towards the task of expanding vaccine availability.

The state of play is that the scientific community has already achieved the stellar feat of discovering vaccines for such a novel pandemic, and getting the World Health Organization's (WHO) approval, in less than two years. The baton has now been passed to the private sector to swiftly manufacture these vaccines. This "brick-and-mortar" process of establishing new vaccine manufacturing plants or tailoring existing plants globally for this purpose, is supposed to be way simpler than scientific vaccine discovery.

An apparent hurdle in this rally, lies in intellectual property rights. The World Trade Organization's (WTO) Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement requires countries to obtain licences from the vaccine developers before manufacturing their vaccines.

Some countries (led by Brazil, South Africa and India) are pushing against this. They argue that temporarily lifting the application of TRIPS, when it comes to approved COVID-19 vaccines, will allow vaccines to be manufactured en masse across all countries. A similar

option proposed is for ASEAN states apply "compulsory licensing" or mandate vaccine developers to give out licences to produce vaccines.

This fight to skirt intellectual property rights, however, is one where no one really wins. This is because either lifting TRIPS or applying "compulsory licensing" will remove the "carrot" or incentive for vaccine innovation and development.

If pharmaceuticals find that they cannot reap the rewards of their earlier investments in COVID-19 vaccine development, then it makes less business sense for them to continue to invest in COVID-19 vaccines. In the long-run, this could debilitate the global community in adapting to the rapidly-evolving virus (case in point: the Delta variant today).

From Contesting to Cooperating: Public-Private Partnership

What evades the notice of most countries is that it is possible to work with the system, and to treat private companies as partners rather than rivals. Patches of partnerships between local and international companies are already happening in the ASEAN region, within Indonesia, Singapore, the Philippines and Thailand.

For instance, Indonesia's Biopharma, the region's largest state-owned biopharmaceutical plant, is eyeing to produce 250 million doses of Sinovac's vaccines. Biontech is aiming to setup a Singapore plant to add "hundreds of millions" to its regional manufacturing capacity, while Thailand's Siam Bioscience is partnering with AstraZeneca to produce 180 million doses a year.

These examples show that states can indeed work with the private sector in expanding the region's "vaccine resilience", although this begs a further transformation in local policies and practices, and strong state backing.

For instance, the Philippines previously had no prominent vaccine manufacturers, based on an earlier ASEAN baseline study. Today, local firm Glovax is partnering with Korea's EuBiologics to produce EuCorVac-19 vaccines. This would not have been possible, without state support by promising to buy 40 million vaccine doses, and in setting-up "Green Lanes" to counteract red tape in securing permits/licences/authorisations. This feat required collaboration among state institutions governing health, food/drugs, trade/industry, investments and science/technology, led by its National Task Force Against COVID-19.

The Real Enemy: Time

While ideological debate on IP rights may be constructive, the real battle today in the war against COVID-19 is not between states and companies, but against time. The pandemic waits for no one. The rest of the region would benefit from emulating the examples of Indonesia, the Philippines, Singapore and Thailand in providing strong state support to launch more effective counters to COVID-19, in partnership with the private sector.

Photo credit: *Unsplash*

Health and Climate Security in a Post-COVID World: Lessons from a Global Health Crisis

Christopher Chen

The ongoing COVID-19 pandemic has created unprecedented change in the world. As we witnessed throughout 2020, the pandemic brutally exposed gaps and frailties in the global health system. For instance, the disruption of supply chains and sudden spike in coronavirus cases during the initial stages of the crisis led to a scarcity of essential medical equipment such as ventilators and medical-grade oxygen. Overstretched bed capacity and staff also meant that many COVID and non-COVID patients were not getting the treatments they needed.

While the world spends approximately US$7.5 trillion each year on health, there still exists large public health gaps in rural and conflict-stricken areas. Lack of access to healthcare services and poor infrastructure are major issues that vulnerable populations living in these areas face. A World Health Organization report indicates that, based on current trends, universal health coverage (UHC) will still not be achievable by 2030. If anything, this pandemic has provided a clarion call for significant improvements in the way society and governments approach public health. Current policies and practices need to be relooked, and if necessary, revamped.

This global health crisis calls for attention to the need for clearer division of labour and well-defined responsibilities during pandemic responses. This is evident when we look at the experiences of some Southeast Asian states such as Singapore, Vietnam and Thailand which have had relatively more success in containing the virus than many other countries. The governments of these countries were quick to implement strict containment measures and enforce the mandatory use of masks. They also carried out rigorous contact tracing and quarantine measures to prevent the spread of the virus within their borders. While there is no perfect system of governance, it cannot be denied that a swift and decisive response is needed in the event of any disease outbreak.

Building Resilient Systems

The building up of resilient health systems is essential not just for coping with the current coronavirus pandemic; it also acts as a bulwark against other types of diseases

Protesters demanding systemic change
Photo credit: Joe Brusky via Flickr, under Creative Commons license

that people face daily. There is a need to invest in strong primary health care, with increased emphasis on health promotion and disease prevention. While curative care should not be neglected, prevention-centred initiatives and systems can help to increase the efficiency of health spending by targeting the root causes of disease outbreaks.

Increased engagement with new or emerging technologies can also improve the robustness of healthcare systems. For instance, the use of telemedicine could be a way to link patients with medical personnel without the need for travel or physical contact. While this is not a new practice in the healthcare industry, it has gained more attention in recent times due to social distancing measures arising from the COVID-19 pandemic. It allows for more access and helps to amplify the capacity of healthcare professionals. The pandemic has provided a huge training ground for people in the use of digital technology; the future of healthcare seems to be heading in this direction as well.

It is important to note that spending on improving healthcare infrastructure alone will not be sufficient. Resources also need to be allocated to public initiatives, which can help to raise public awareness of infectious disease outbreaks. This can include educating the public on good hygiene practices, the need for social distancing during an outbreak, as well as how to avoid succumbing to pandemic misinformation. Particularly with the rollout of the vaccine, the need to curb misinformation becomes even more pressing. Governments should provide citizens with accurate updates from trusted sources in a timely and transparent manner. This will go a long way in convincing the public of both the efficacy and safety of the vaccine.

The sheer scale and impact of COVID-19 might be the impetus needed to spur reform in the healthcare sector and push the world towards achieving its goal of universal health coverage. As we attempt to navigate this 'new' world, the need to innovate and adapt takes on paramount significance.

Climate Change and Anthropocene Risk

While the COVID-19 pandemic has understandably taken the centre stage over the past year and a half, another existential threat - climate change - has also been looming in the background, one that is increasingly current, urgent, but possibly underestimated or ignored.

We are currently living in the Anthropocene – the age of humans - where human activity is having a significant impact on the planet's climate and ecosystems. In response to this, scientists have coined the term 'Anthropocene risk' to reflect the complex interrelation of planetary changes and social imbalances that are currently afflicting our planet.

According to UNDP's *Human Development Report 2020*, COVID-19 has demonstrated how shocks emanating from disturbances in life systems and climate change are affecting people and changing societies. Indeed, scientists have long forewarned of the potential proliferation of zoonotic pathogens - those that jump from animals to humans – in society, which arise due to the pressures people put on planet Earth. Arguably, COVID-19 might be a prelude to a new age of protracted health crises and Anthropocene risks.

Planetary Health and the Need for Systemic Changes

This brings the idea of planetary health – the health of human civilisation and the state of the natural systems on which it depends - to the fore. In recent times, there have been calls to transform our approach towards public healthcare, which has traditionally focused on the health of human populations and has not taken into consideration the well-being of natural ecosystems and the environment.

Consciously or not, human decisions and actions have given rise to the interconnected planetary and social imbalances we face. To navigate the Anthropocene, society as a whole needs to enhance equity, foster innovation and instil a sense of stewardship of nature. We must critically examine how human values and institutions interact with one another, to solve the collective action problem of climate change. To this end, two kinds of climate action can be taken. Firstly, individual action can be undertaken to alleviate climate change. This involves behavioural changes by individual consumers – for example, cutting down on single-use plastic cutlery. Secondly, systemic changes which involve coordinated measures taken as a society can also help address climate change. These include national commitments to achieve net-zero emissions as soon as possible and developing technology and policy solutions for sustainable development.

The future is not necessarily bleak. If we start early, tap into the power of science and innovation, and ensure that solutions work for the most vulnerable, the risks associated with climate change can still be mitigated and reversed. As United Nations Secretary-General António Guterres puts it: "The climate emergency is a race we are losing, but it is a race we can win".

Planetary Health: A More Resilient World Post-COVID-19?

Margareth Sembiring

World leaders gathered at the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow made a commitment to end deforestation by 2030. The new multibillion-dollar pledge in the climate summit manifests a renewed and stronger interest in nature-based solutions. The care of nature has indeed come into sharper focus in recent years.

It is perceived to offer more holistic solutions to multiple environmental issues and their attendant consequences that include the current COVID-19 pandemic. Among the various theories that explain the causes of the global health crisis, nature decline has emerged as a plausible answer. This view posits that degenerating nature increases the risks of zoonotic disease outbreak and spread – from animals to humans.

Planetary Interdependence and Southeast Asia

This context set the foundation for the concept of planetary health to gain some traction. As an emerging idea, planetary health focuses on the interdependence of human health and the health of the environment. The COVID-19 pandemic has amplified this critical interdependence. This framing positions environmental protection, conservation, and restoration as a key element to building a more resilient world post-COVID-19.

The paradox is seen in nature's continuing decline regardless of the existence of various institutions established to protect and conserve biodiversity.

The Southeast Asian experience is a case in point. ASEAN-led initiatives are found in the ASEAN Centre for Biodiversity (ACB), the ASEAN Working Group on Coastal and Marine Environment (AWGCME), and the ASEAN Working Group on Nature Conservation and Biodiversity (AWGNCB).

Other sub-regional arrangements include the Turtle Islands Heritage Protected Area between the Philippines and Malaysia; Sulu-Sulawesi Marine Ecoregion (SSME) in the Coral Triangle between Indonesia, Malaysia, and the Philippines; and the Heart of Borneo – one of the most important centres of biodiversity in the world – between Brunei Darussalam, Indonesia, and Malaysia.

ASEAN not on Track

Despite their comprehensive mandate, the latest 2017 ASEAN Biodiversity Outlook 2 report concludes that ASEAN member states had not been on track to meet the Aichi Biodiversity targets due in 2020 as part of a multilateral treaty. Of the 20 Aichi Biodiversity targets agreed to in Aichi, Nagoya, good progress was made only in one target area, namely in designating certain percentages of terrestrial, inland water, coastal and marine areas as protected areas.

The report elaborates on reasons behind such a lack of progress, among which was inadequate action taken to address the drivers and pressures of biodiversity loss that often originated from other sectors. Examples of such drivers include increasing resource demand for income and food, growing population in coastal area, marine debris and pollution, excessive and direct fish take, and habitat destruction.

These observations imply that biodiversity protection and conservation efforts have largely been confined within their own domain and are not purposefully designed to mitigate the sources of threats to biodiversity loss.

Additionally, the works of these regional institutions were often found to be rather fragmented and in need of stronger coordination, cooperation and collaboration between agencies. Problems include conflicting policy objectives among sectors and government levels, and fragmented programs activities between ministry in charge of biodiversity protection and other institutions.

This partly explains why environmental degradation continues in the region.

Planetary Health Concept: Better Approach?

In light of these apparent limitations, the concept of planetary health may offer a better approach. The concept embodies systems thinking and encourages systems change that may lead to the embodiment of environmental protection and conservation as the overarching guiding principle across different sectors.

It offers an integrative approach that can bring synergies and coordinated policy action to otherwise conflicting agenda such as land-use planning and biodiversity protection; and more consistent policies and more coherent interventions in other sectors to minimise trade-offs among different targets and achieve environmental goals.

A stronger emphasis on nature across different sectors will strengthen environmental regulations, boost their enforcements, and enhance their monitoring capacity. Moreover, due to its focus on the environment, the planetary health concept can generate co-benefits to other green initiatives.

For example, its adoption across sectors may lead to significant improvement in resource efficiency, sustainable agricultural intensification, cleaner production processes, reduction in food loss and waste, improved access to food and good nutrition, and changes in lifestyle, consumption preferences and consumer behaviours.

The planetary health concept thus has the potential to address the various gaps identified in existing biodiversity protection and conservation arrangements in Southeast Asia. The concept can also be applied to similar initiatives at the national and international levels thereby contributing to better care of the planet.

Towards a More Resilient World Post-COVID-19

The COVID-19 pandemic has turned the spotlight on environmental degradation and reinforced the relevance of the environment-human health nexus. By linking the health of the Earth's systems and human health, the planetary health concept is offering a pathway towards of more resilient world post-COVID-19.

Prioritising environmental protection and conservation not only could reduce the risks of future pandemic, but also it could contribute to solving triple planetary crisis of biodiversity loss, pollution and climate change.

The challenge, however, lies in the integration of the concept in different sectors. For it to be effective, concrete parameters and clear indicators need to be laid out to enable each sector to contribute meaningfully towards a healthier planet. These will lead to better policy synchronisation and coherence across sectors.

The involvement of multiple stakeholders including the epistemic or knowledge community, civil society, the business and health sectors, among others, is necessary to operationalise the planetary health concept in various settings. There is a need to provide credible quantification of the disease burden relating to biodiversity loss. Significantly, governments need to be convinced of its merits.

As countries continue to juggle between dealing with the virus and reviving the economy, the attention given to the concept of planetary health may not be immediately gaining steam. Regardless, considering its immediate relevance in view of the current public health crisis, and the greater emphasis placed on the care of nature to solve climate change issues, among others, more effort is critically needed to examine how it can be applied across sectors to create a more resilient world post-COVID-19.

Environmental protection, conservation and restoration key to more resilient post-COVID-19 world.
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'Code Red for Humanity': What Next for Mankind?

Margareth Sembiring

THE IPCC – Intergovernmental Panel on Climate Change (IPCC) – released its latest report in early August this year, ominously dubbed as 'code red for humanity'. The report re-affirmed the attribution of climate change to human activities and re-emphasised the perils brought about by the changing climate. The report maintains similar high alert tone that characterised related reports released previously.

For example, following the 2018 IPCC report that outlined possible impacts of a 1.5°C warmer world, the 2019 UNEP Emission Gap report estimated that greenhouse gas emissions must go down by 7.6 per cent annually between 2020 and 2030 to avert the Earth from warming to such temperature by the end of the century. A goal that was daunting, if not almost impossible to attain, because historically, the world had never sustained such a drastic emission reduction over a prolonged period.

Push for Climate Mitigation Measures

The adoption of renewable energy technologies has been regarded as a key strategy in mitigating climate change. It has been growing globally in recent years thanks to reduced costs. Regardless of the positive trend, it has thus far fallen short of the speed and the scale needed to keep the temperature rise below 1.5°C by the end of the century.

As the time window to meet the Paris target is fast closing, the pressure to expand renewable energy technologies is mounting. This is done under the calculated conclusion that a more ambitious adoption of renewable energy technologies will bring global warming under control. Such push is reflected in the 2021 IPCC report that exhorted countries to engage in immediate, rapid, and large-scale reductions in greenhouse gas emissions.

Prior to that, the Climate Ambition Summit held in December 2020 called on countries to step up their climate mitigation commitments through stronger Nationally Determined Contributions (NDCs) and long-term strategies to net zero emissions.

Similarly, the Leaders Summit on Climate convened by US President Joe Biden in April 2021 encouraged countries to pursue more aggressive climate action. In a bid to incentivise more rapid deployment of renewable energy

Carbon emission mitigation is a key component in the fight against climate change
Photo credit: Pixabay via Pexels, under Creative Commons Zero license

technologies, the meeting highlighted the simultaneous economic benefits such measures would bring.

Building Up Towards COP26

Within this agenda, various countries have come forward to pledge stronger emission reductions in recent months. In September 2020, China announced its plan to go carbon neutral by 2060. The following month, South Korea declared its intention to reach carbon neutrality by 2050.

Likewise, Japan has pledged to increase its emission reduction target from 26 per cent to 46-50 per cent below 2013 levels by 2030, and Canada from 30 per cent to 40-45 per cent from 2005 levels by 2030.

All these are feeding into the upcoming 26th session of the Conference of the Parties (COP26) to the UN Framework Convention on Climate Change (UNFCCC) in November 2021. This conference is significant because it will mark the fifth year after the signing of the 2015 Paris Agreement. Countries are due to submit their updated NDCs by then.

These developments give a reason to hope, but it remains to be seen whether the new, presumably more ambitious pledges, and their subsequent implementations, will be sufficient to decarbonise the world within the stipulated timeframe.

Drivers Unaddressed

There is a slight catch, however. While much effort is being pursued to promote and accelerate the use of renewable energy technologies, little thought is given to parallel realities that need equal attention. For example, although renewable energy technologies emit no carbon, the productions of their parts are not carbon-free. This is because such productions are currently being supported by fossil fuels.

Furthermore, at present, the use of electric vehicles depends heavily on the electricity generated by fossil fuel-fired power plants. In other words, the ongoing low-carbon transition comes with carbon footprints. This will take place for a time until renewable energy systems reach the capacity sufficient to be on par and overtake existing fossil fuel-fired power plants. Until then, emission reduction is likely to be gradual if at all. Similarly, the focus of climate mitigation efforts on renewable energy development tends to obscure an underlying reality of differentiated carbon emissions across different segments of society. Of total global emissions, 50 per cent was generated by 10 per cent of the world's richest. 40 per cent was contributed by the middle 40 per cent, and the remaining 10 per cent by 50 per cent of the world's poorest.

This 'champagne glass' phenomenon that was observed in 1990, and again in 2015, bears semblance to the rate of consumption of the Earth's depleting resources that is much higher in rich countries compared to developing countries.

The deeper causes of such imbalances are the drivers of rising emissions and environmental destructions, and they are unlikely to get addressed by a worldwide shift to renewable energy technologies alone. Therefore, while low-carbon transition offers a technical solution to reduce emissions, a lack of attention to these drivers can slow down transition progress or even give rise to other externalities that will require other set of measures to deal with.

What Next for Humankind?

Against this backdrop, the next important question is what is there then for humankind. While various endeavours are being made to honour the Paris Agreement, the current fight against COVID-19 pandemic has shown that mankind probably just needs to learn to live with it at one point.

In practical terms, this means allocating more resources to take more aggressive climate adaptation initiatives. Disaster response capacity needs to be strengthened, and possible recovery pathways must be carefully charted. Equipping populations with the mindset and the skillset necessary to face more frequent weather-related events and disasters is imperative.

Furthermore, sufficient attention has to be given to the different capacity to adapt across societies. Societies with more resources will find it easier to adapt compared to those having less. This needs to be addressed early to prevent issues such as climate migrations and conflict situations.

There is a question of timing too. Adapting too early may render the measures obsolete by the time the anticipated events take place, or they may never happen all. Evaluating adaptation measures regularly and updating them according to the latest developments are necessary. Warnings after warnings have been issued throughout the years. It is time to have stronger commitments to prepare for what may come.

Ocean Health and COVID-19: Environment-Health Nexus

Lina Gong

In year two of the COVID-19 outbreak, while countries are still responding to or preparing for new waves of cases, efforts to address other global challenges resumed and are moving forward. On 8 June, the UN organised a global virtual celebration for the 13th World Oceans Day. This year's theme was "The Ocean: Life and Livelihoods", resonating with the UN's COVID-19 response and recovery plan. The convergence reflects the connection of the two agendas and the need to synergize global action to deal with different challenges.

Intersection of Environmental and Human Health

The global health crisis has prompted extensive reflections on public health and the notion of planetary health has received increasing public and policy interest. Planetary health essentially refers to an approach to public health that links the health of people with the state of surrounding natural ecosystems. Planetary health coincides with the non-traditional security (NTS) perspective, which emphasises the intersectionality of different NTS issues.

Evidence of the intersection is plenty. Examples include the correlation between environmental pollution and human health problems as well as the zoonotic origin of coronavirus diseases, such as SARS and MERS. One hypothesis of the origin of COVID-19 is that the disease originated from the nature and transmitted to humans from animals. As part of the ecosystems, the state of the marine environment has important bearing on human health too. The oceans are crucial for many people's food security, supporting source of nutrition for over three billion people. The quality of fish and seafood concerns food safety.

The inextricable links between human activities and the oceans caused serious consequences on the marine environment. About 40 percent of the ocean suffers from pollution, depleted fisheries, and loss of coastal habitats. Degradation in the marine environment threatens human health. For example, Minamata disease which was initially reported in Japan in the 1950s was caused by consumption of fish and shellfish contaminated by methylmercury. In particular, marine plastic waste has received greater attention due to the damages caused by this form of pollution to the marine ecosystem. One study of the Ellen MacArthur Foundation in 2016 predicted that there would be more plastic waste than fish by 2050 without effective intervention. Plastic waste destroys the marine ecosystem by killing sea creatures and polluting the marine environment. Microplastics enter our food chain as people consume seafood and fish that are contaminated.

Marine Plastics: Threat to Ocean Health

Action to restore and protect ocean health began to gain momentum globally a few years ago. The UN convened the first Ocean Conference in 2017, during which governments adopted the declaration, "Our Ocean, Our Future: Call for Action". The 4th Session of the UN Environment Assembly in Nairobi in March 2019 adopted resolutions on promoting sustainable development, including one that calls for cooperation in reducing marine plastic debris. 2021 marks the beginning of the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

Southeast Asia has also seen the same trend. This region faces a daunting challenge from marine plastic pollution, with Indonesia, the Philippines, Thailand and Vietnam among the biggest contributors of marine plastic waste in the world. In recognition of the severity of the challenge, countries in the region have taken actions. At the national level, countries are strengthening efforts tackling the challenge. Indonesia has set the target to reduce marine plastic debris by 70 percent by 2025. Thailand banned single-use plastic bags from 1 January 2020. Indonesia was to impose a similar ban in Jakarta by June 2020. The Philippine government is considering this option too.

ASEAN adopted the Bangkok Declaration on Combating Marine Debris in ASEAN Region in June 2019. Norway provided US$ 3 million in November 2019 to support the implementation of the Bangkok Declaration through the ASEAN-Norway Cooperation Project on Local Capacity Building for Reducing Plastic Pollution in over three years. The United Nations Economic and Social Commission for Asia and the Pacific in partnership with Japan launched a project in May 2020 to support local implementation of the ASEAN Framework of Action on Marine Debris. ASEAN launched the Regional Action

Plastic waste on a beach in Malaysia
Photo credit: McZusatz via Wikimedia Commons

Plan (2021-2025) in May 2021. These developments show that the work to reduce marine plastic debris is gaining momentum in Southeast Asia.

Impact of COVID-19 on the Combat against Marine Plastics

The COVID-19 outbreak however has brought uncertainties to these initiatives. Some people believe that the pandemic has created a window of opportunity for addressing environmental and climate challenges, including marine environmental pollution. Containment measures such as temporary shutdown of activities and travel restrictions substantively reduced emissions of various pollutants. Nevertheless, other forms of pollution have increased as a result of the pandemic response, many of which have added stresses on the marine environment. Lockdowns resulted in a surge in plastic packaging, which would most likely end up in the oceans. Due to the consideration for hygiene, businesses have to suspend the effort to encourage customers to bring their own reusable containers.

Moreover, waste management in Southeast Asian cities has been affected, particularly those relying on individual waste collectors. Effective waste management is critical in effectively addressing marine plastic debris, as land-based waste is a primary source of marine plastic debris. The significant increases in the consumption of single-use plastics for various purposes during the pandemic put further pressure on waste management. However, the COVID-19 outbreak has also reduced the mobility of the waste collectors in the informal sector.

As social and economic activities are gradually getting back to normal in many countries, it is important to ensure that environmental initiatives will regain the momentum registered before the pandemic. Stimulus packages should take strongly into account the environmental impacts of economic recovery. More importantly, a nexus approach should be embedded in our long-term development strategies, which sufficiently appreciate the intersection of human activities and the state our surrounding environment. The COVID-19 pandemic is a powerful reminder to care for the health of our planet, including the oceans, as it is closely linked to our health.

Battling Marine Plastic Pollution: Role of Nuclear Technology

Julius Cesar Trajano

Plastic waste from mismanaged disposal of single-use face masks, gloves and other personal protective equipment (PPE) used during COVID-19 has ended up choking our oceans. Its complex consequences may last even beyond this pandemic. The worsening plastic pollution in our oceans is a critical area where nuclear technology can play an important role and provide innovative alternative solutions to conventional approaches.

The International Atomic Energy Agency (IAEA) launched in 2020 a new initiative, the NUclear TEchnology for Controlling Plastic Pollution' (NUTEC Plastic), which intends to explore and rapidly expand the use of nuclear technology to fight plastic pollution in the oceans and reduce plastic waste globally.

COVID-19 & Deteriorating Oceans

Even before the pandemic, marine plastic pollution was already posing an existential threat to marine wildlife, ecosystems, food safety and human health globally. Marine pollution is an issue of global concern, in particular for countries in Southeast Asia that rely on fisheries as a source of food and income.

Every year about 8-12 million metric tonnes of plastic debris find their way into the oceans, including microplastics. With the COVID-19 pandemic, plastic pollution has even been exacerbated. A report by marine conservation organisation OceansAsia estimated that 1.56 billion face masks had entered the oceans in 2020. This has resulted in an additional 4,680 to 6,240 metric tonnes of marine plastic debris. It will take 450 years for these face masks to degrade, gradually disintegrating into more hazardous microplastics while endangering marine wildlife.

In Southeast Asia, five countries, namely Indonesia, Malaysia, the Philippines, Thailand and Vietnam have been listed as among world's top 10 contributors of mismanaged plastic waste. Collectively, they generate 8.9 million metric tonnes of mismanaged plastic waste annually.

IAEA Director General Grossi presenting the IAEA's NUTEC Plastics project
Photo Credit: IAEA via Flickr, under Creative Commons license

Turning Plastic Waste into Economic Value?

How can nuclear technology help address marine plastic pollution? Many studies have documented the impact of large plastic debris on the marine environment. However, further studies are needed to provide reliable and accurate assessment of the potential damage caused by microplastics which can be ingested by marine animals, including fish.

Together with the toxic chemicals that have accumulated on microplastics, they can be transferred through the food chain and be ingested by humans through the consumption of seafood. This has been identified as a health hazard but has not yet been adequately researched. The major challenge for scientists and policymakers in dealing with ocean plastic pollution is a lack of knowledge on the exact concentration of microplastics in the oceans and the marine food chain.

Nuclear techniques can play a critical role as they are already successfully deployed to examine marine pollution processes. Specifically, radioactive tracer techniques can help scientists understand how microplastics get contaminated by toxic pollutants and how they transfer such pollutants to marine organisms and to the food chain.

Such techniques were recently successfully done in Ecuador, revealing that microplastic pollution in the eastern tropical Pacific Ocean will worsen in the coming decades. Precise and timely information on the movement, amount and impact of microplastics can help strengthen marine pollution monitoring programmes, environmental management strategies, and seafood safety regulations.

Another area where nuclear technology can make an impact is in the recycling and reduction of plastic waste. When conventional methods of recycling of plastic waste are no longer possible, radiation technologies can be used to recycle plastic waste into new commercially viable plastic items, thus generating economic benefits while reducing waste volumes.

While this is a promising technique based on recent scientific studies, it has yet to be seen whether countries can successfully integrate this technique into their sustainable approach to plastic waste.

Southeast Asia: What Can Be Done

Southeast Asian countries should step up to explore the peaceful applications of nuclear technology. These include environmental management. It is thus timely that Indonesia and the Philippines have both expressed their strong commitment to support and participate in the recently launched NUTEC Plastic initiative of the IAEA. Both have decades of experience in civilian uses of nuclear technology and vowed to address their worsening plastic waste problem. In recent years, Indonesia, Malaysia, the Philippines, Thailand and Vietnam have developed or are developing their national action plans to curb marine plastic pollution.

The integration of the NUTEC Plastic project with their plastic waste control programmes will certainly enhance their respective action plans which all promote the deployment of innovative scientific solutions.

Similarly, utilising nuclear technology can definitely advance the 2019 ASEAN Framework of Action on Marine Debris, which encourages ASEAN member-states to promote and enhance "science-based decisions and policies on marine debris prevention and management".

The region has a growing pool of local nuclear scientists who can collaborate with other relevant environmental scientists and policymakers to develop and apply technologies for plastic waste control.

Plastic pollution is a problem as big as the ocean; hence, support and contribution from different stakeholders are critical in tackling marine plastic pollution. The region's nuclear technology research and training centres should therefore be part of the multi-stakeholder collaboration which is critical in searching for innovative scientific solutions.

Way Forward: A Sustainable Approach

The ASEAN-IAEA Practical Arrangements on the peaceful uses of nuclear technology, signed in 2019, would be a useful framework for knowledge and technology transfer to Southeast Asian nations. They can equally be the foundation for the two organisations to explore the potential of nuclear technology application in curbing marine litter in the region.

As ASEAN member-states pledge to collectively address marine pollution, they should maximise the growing regional cooperation in nuclear safety, security and technology spearheaded by the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM).

In view of the existential threats posed by marine plastic pollution, it is imperative that countries in the region explore all effective ways to curb and reverse the negative impacts of plastic waste on the marine environment and ecosystem in regional seas. Building on the success of existing ASEAN cooperation in nuclear technology may have the potential to enhance the region's environmental security with safe, secure and peaceful uses of nuclear technology.

COP26: The Indispensable Role of Nuclear Power

Julius Cesar Trajano

COP26 – the UN Climate Change Conference – in Glasgow, the United Kingdom, which run from 31 October to 12 November 2021, featured substantive discussions on how nuclear power and technology can help tackle climate change. The peaceful use of nuclear science and technology was strongly represented and articulated through the events organised by the International Atomic Energy Agency (IAEA) at COP26, with the goal of contributing to an informed debate on the benefits of nuclear power and applications.

Nuclear technology was promoted as "an indispensable tool" for achieving a Net Zero World. While tapping nuclear power remains a hotly debated issue, nuclear power and nuclear applications have a lot to contribute to getting global carbon emissions to net zero and boosting climate change adaptation measures. The IAEA Director General Rafael Mariano Grossi said nuclear power should have a "seat at the table" at climate change discussions. What do nuclear energy and technology actually bring to the table?

Nuclear Power for a Low-Carbon Future?

Thirty-two countries operate nuclear power plants, which provide 10% of the world's electricity and more than one quarter of all low-carbon electricity. The IAEA argued that the use of nuclear power has prevented the equivalent of around 70 gigatonnes of carbon dioxide emissions over the past 50 years.

It strongly recommended that nuclear power generation capacity will need to at least double over the next three decades in order to limit the average global temperature increase to well below 2 degrees Celsius as called for by the Paris Agreement, according to the four model scenarios by the Intergovernmental Panel on Climate Change as well as studies by the International Energy Agency (IEA).

Major nuclear power producers such as the United States, Russia and China, have all included expanded nuclear power capacity in their national strategies to cut down their CO2 emissions. In particular, they are all actively

IAEA at COP26
Photo credit: IAEA via Flickr, under Creative Commons licence

developing the emerging technology of advanced and small modular reactors, being touted by the nuclear industry to be more affordable than large conventional nuclear power plants.

Currently, Russia has put into operation a floating modular reactor using this technology. Another nuclear innovation showcased at COP26 is the potential of nuclear hydrogen in decarbonising sectors, such as industry and transport, through the production of low-carbon hydrogen from nuclear power.

Debate Over Nuclear Power Contribution

The contribution of nuclear power plants in reducing greenhouse gas emissions remains debatable for other experts. Nonetheless, as demonstrated in COP26, nuclear energy must not be completely ruled out. For many countries, including those in Southeast Asia that are actively studying this option, it can play a complementary role with other low carbon sources such as renewables.

These innovations and the use of nuclear power should also be seen through climate change-energy security nexus, in which countries deploy nuclear power, not just to reduce their carbon emissions, but also to strengthen their energy security by diversifying their base-load power sources. In this respect, both nuclear power and renewables are complementary in providing low-carbon energy transition.

In Southeast Asia, especially the Philippines, the deployment of small, advanced reactors is now being explored. This is in the event that they decide to pursue nuclear power electricity generation, in view of their need to diversify their energy sources and attain their low-carbon commitments.

However, there are key concerns associated with nuclear power that need to be addressed such as nuclear safety and security issues; the need to update nuclear regulatory, emergency preparedness and response frameworks; the intractable nuclear waste issue; and more importantly, public acceptance to solidify the role of nuclear in addressing climate change.

Several countries in the region have yet to ratify key global nuclear safety and security treaties such as the Convention on Nuclear Safety (CNS) and the Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM), although gradual progress in this regard has been seen in the region in recent years.

Nuclear Technology in Climate Adaptation

While ongoing debates on the critical role of nuclear power plants in achieving the goals established in the 2015 Paris Agreement remain unsettled, the peaceful applications of nuclear technology in climate change adaptation have been expanding in recent years.

The nuclear discussions at COP26 demonstrated how governments, farmers and scientists can boost resilience to the impacts of climate change and institutionalise more sustainable management of land and water resources using nuclear science and technology.

For instance, nuclear and related techniques can boost agricultural resilience to climate change, in reducing greenhouse gas emissions, and in increasing agricultural productivity – altogether known as climate-smart agriculture. In addressing water scarcity caused by the changing climate, a form of nuclear technique known as isotope hydrology can help countries monitor valuable groundwater resources, supporting decision makers in developing sustainable water use policies.

Such contributions of nuclear technology have been increasingly applied in Southeast Asia. Nuclear technology has helped farmers grow rice that can cope with the diverse effects of climate change. Recent innovations from Indonesia, Malaysia, the Philippines, Thailand and Vietnam showed how farmers have boosted rice production and planted better crops in harsh climate conditions in the past five years with the help of nuclear techniques.

In the past years, the IAEA and the Food and Agriculture Organisation (FAO) have been helping local scientists use nuclear technology to develop climate-smart agricultural practices and improve water management.

Addressing Fears and Misconceptions

However, there are still challenges to the expansion of the peaceful uses due to misconceptions or concerns about nuclear energy and technology. There is a need to reframe nuclear issues as one that links nuclear technology with climate change adaptation, such as in COP26.

The misconceptions arising from issues of nuclear weapons proliferation, nuclear accidents such as in Fukushima and Chernobyl, and radioactive contamination can be addressed by how much nuclear technology actually help countries achieve several of their commitments to the Paris Agreement.

As demonstrated in COP26, the peaceful uses of nuclear technology cannot be excluded from innovative approaches to addressing the world's most pressing and complex challenge – climate change and its harsh impacts.

COP26: Sustaining the Global Food System

Paul Teng

Climate change clearly affects food production. This in turn contributes at least a third of the greenhouse gas emissions causing climate change. Efforts to keep temperature increase to 1.5 degrees Celsius – the new "safe" upper-limit for global warming – are expected at best to give mixed results from climate mitigation action.

World population is anticipated to reach about 10 billion by 2050 accompanied by increased demand for food. Climate change action needs to strongly address the sustainability of food production systems. This must include the livelihoods of millions of small-scale farmers and animal herders who depend on these systems.

Urban gardening in Singapore
Photo Credit: Paul Teng

Sustaining Food Production and Farmer Livelihoods

Yet COP26 has so far provided little evidence that countries, whether acting individually or together, have the will to formulate concrete and meaningful action. Even more so, to provide financial support for small-scale farmers in developing countries, estimated at half a billion strong, to take action.

Climate activist Greta Thunberg was quoted as saying in Glasgow that much of the discourse at COP26 amounts to "hypocrisy" where action does not match intentions, or needs. And the thousands of young demonstrators in the streets outside COP26 seem to agree with her.

Sustainability discourse in the context of climate change must not only be about the environmental, social and governance (ESG) aspects but also include an economic (livelihood) consideration. The sustainable agriculture movement of the 1980s used a set of rubrics based on "EES" (Environment, Economic and Social); it had non-government entities such as the International Alliance for Sustainable Agriculture as strong advocates.

The distinction between "EES" and "ESG" is particularly important for the world's small-scale farmers and animal herders in the Asian-African regions who are responsible for most of the world's food production. The economic (E) rubric recognises that small-scale farmers need to have decent livelihoods, without which they cannot sustain their farming and their families.

Climate action has therefore to take into account economic aspects of small-scale farming. It needs to reflect the voices of about 500 million smallholder farmers which are often missing or poorly represented at global meetings.

Wicked Problem: Food Production and Climate Change

Climate change action has the features of a "Wicked Problem" when the issues of climate change, sustainable agriculture and farmer livelihoods are considered together, which must be the case. Can a wicked problem be unpacked into parts which can be addressed separately and, in their solution, contribute to the overall solution?

Pragmatically, this may be the only approach. Agriculture contributes to climate change and climate change affects agriculture. The "whole is more than the sum of its parts", and food production is only one component of food systems. The UN's Food and Agriculture Organisation (FAO) views food systems as comprising "the entire range of actors and their interlinked value-adding activities".

This involves "the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded".

So the hope for humankind may be to unpack a big wicked problem associated with climate change into its components. Then follow this up by solving the component issues through cooperative efforts. This is in the hope that they may lead at least to a partial solution of the bigger wicked problem.

The Net-Zero Challenge

Agriculture is the second biggest contributor to global greenhouse gasses, but it is an activity that we cannot live without. COP26 has given much attention to agriculture-induced deforestation which severely unbalances the carbon equation. Attempts to reduce deforestation only tackle part of the problem if the needs of small-scale farmers are not part of the solution, and if technology is not used to produce more from existing farmland.

But there is a gap between actual livelihoods and practices at the farming community level and high-level pronouncements of policies and aspirations in international forums. How do we also ensure that the livelihoods of small-scale farmers in sustainable agriculture are not jeopardised by climate change action? These are but a sample of the questions associated with attempts to balance out the carbon equation in farming – the "net-zero" solution.

There is general agreement that global food demand will increase by at least 50 per cent by 2050. This demand has to be met in the face of the key challenge of climate change and with reduced capacity to grow food because of declining land and freshwater resources, and with declining (ageing) farmer numbers.

Concurrently, the call for sustainable farming has gotten louder, especially as we approach the 2030 deadline to achieve the UN's Sustainable Development Goals (SDGs). Increased sustainability, however, can only be achieved by intensifying research; adopting new farming approaches; technologies that contribute to a circular economy; and game-changing policies – all backed by political will.

Ultimately, there can be no sustainable development without addressing the inter-linked issues of climate change, livelihoods and food production.

The Greenwashing Phenomenon

Large corporations, much more than small enterprises or small-scale farmers and herders, have the means to report their achievements for meeting sustainability goals with climate action. In an earlier *RSIS Commentary* I had warned about the "Greenwashing" phenomenon to establish corporate credentials in sustainability, especially under the umbrella of abeyance with the "ESG" (Environment, Economics, Governance) rubrics.

In the COP26 talks, climate activists have rightly highlighted that some corporations have used the governance (G) rubric to support their sustainability and climate credentials, and be seen as responsible citizens.

But to protect agricultural ecosystems and reduce deforestation will require corporations and governments to explicitly factor in the interests of the half billion small-scale farmers and herders in developing countries.

Community Gardens: Singapore's "Fourth Food Basket"?

Jose Ma. Luis Montesclaros and Paul Teng

Singapore's '30-by-30' food security strategy is under pressure from three global challenges of climate change; supply chain disruptions induced by COVID-19; and a growing global demand for food. Can it leverage unconventional means to produce more food locally, through a "fourth basket", and if so, what would that be?

In Singapore's 30-by-30 food security strategy, the country has set an ambitious target of locally producing 30% of its nutritional needs by 2030. It is envisaged that this will be achieved by expanding supplies from local vegetable, egg and fish farms, new investments in alternative proteins such as plant-based protein and cultured meat, and new technologies to create food from waste. All these represent one of the three "baskets" for food security for Singapore, i.e., the local production basket.

Community Gardens: Potential "Fourth Basket" for Leafy Vegetables

For leafy vegetables, imports make up the largest food basket, contributing 86% of local vegetables supplies (about 80,000 tonnes). Two other baskets, namely local production and growing overseas, contribute the remaining 14% of the country's leafy vegetable supplies.

Will these three food baskets be adequate to meet Singapore's food needs in the face of climate change (as in the Inter-Governmental Panel on Climate Change's 6th Assessment Report), COVID-19 induced supply chain disruptions, and growing global demand for food? Can it produce more food locally, through a "fourth basket" consisting of community gardens in available spaces?

The imperative is to shorten food supply chains to buttress against growing production and supply-chain risks and uncertainties. Singapore's food resilience can potentially be boosted by significantly upscaling the amount of local production within unused spaces, through community gardens.

Community gardening is counted as a "non-commercial" source of food in Singapore, unlike typical commercial farms such as Sky Greens and Comcrop, which are run as corporate entities. Community garden initiatives include growing food on public estates, private estates, and institutions/organisations (schools, hospitals).

An earlier study showed HDB rooftops can provide 661 hectares of space for farming purposes, while the National Parks Board (NParks) has also allocated more than 2,000 plots (2.5 square metres each) of allotment gardens in over 23 parks/gardens. There is further scope to expand the use of unused spaces like interim land and industrial spaces.

However, community gardens' contributions to national food security have not been substantial in adding to the base level of national vegetable production. There is no category in Singapore Food Authority (SFA) reports that outlines the contributions of community gardens to food availability in Singapore.

Challenges in Regulatory Complexity and Productivity

Locally-produced vegetables are mostly from private companies/brands, as in NTUC Fairprice's website (Singapore's largest retailer). We argue this is plausibly because published guidelines in the SFA's "industry guide" for selling products are currently tailored to commercial farms. Individuals setting up their own commercial farms go through a long series of steps, which take up to 12 weeks to accomplish, including coordination with potentially 11 government agencies in Singapore.

Therefore, while hobby farmers within community gardens do not ordinarily have such organisational capacity to comply with the complexity of such requirements to sell their products, they need to undergo the same process of receiving the licence as well as certification as commercial farmers.

A further challenge is from the perspective of low levels of productivity within non-commercial community gardens. It is understandable that, given their limited time and investments, hobby farmers will not be as productive as the commercial farmers. However, low productivity is not unrelated to the regulatory challenges in selling their produce. If community gardeners are unable to market their products, owing to their lack of organisational capacity to comply with the requirements, then there is also no incentive to boost their productivity levels.

A "chicken-egg" problem therefore exists of low productivity levels reducing the investments of time and resources by community farmers in growing food, and in turn, low productivity levels occurring as a result of these low time investments. Further issues include limited farmer expertise and limited marketing information on crops and pricing.

"Kampong" Clusters and Digital Technologies: Potential Solutions?

One way forward in addressing these challenges is through organisational innovation, or by encouraging communities to cluster together within their neighbourhoods ("kampongs") to form a corporate entity. Individual members can help share the time and resources required for registering their farms and receiving the licences to sell their products.

This is not completely novel, as there are ad hoc approaches that are already in play. The Open Farm Community (OFC) is a restaurant that taps community produce, to the extent feasible, combined with commercially sourced products, while the Edible Garden City (EGC) provides space for farmers to grow their food, and helps market them to over 220 dining establishments across Singapore.

Another potential approach is by leveraging digital technologies in transforming how community gardening is done, reducing the time and resources required of community farmers in growing food while boosting productivity.

These include digital farmer advisory applications to guide farmers in improving productivity and addressing crop pests/diseases; automated irrigation to make farming less tedious while increasing water use efficiency; satellite and drone imagery to help monitor crops; digital labelling for food safety; and e-commerce for marketing products.

While many community gardeners may not be farming for profit but as a lifestyle activity, it is worthwhile exploring how community gardens can contribute to Singapore's vegetable supply given the extensive presence of unused space, and the potential income generation potential of this initiative. However, this requires no less than a mindset change on the part of regulators, the private sector, and the gardeners themselves.

HDB rooftops offer a broad expanse of unused space to tap for community food farming purposes
Photo Credit: Jimmy Tan via Flickr, under Creative Commons licence

Women's Economic Empowerment in the Post-Pandemic World

Tamara Nair

The empowerment of women requires the existence of evolved societies that value diverse voices – a gain from inclusive and equitable policies. While economic development and the growth of a nation are marked by, among other factors, a resilient workforce, good economic planning and visionary leaders, it does not necessarily have to involve 'evolved' thinking as far as gender relations are concerned. Many countries are testament to that. But after a devastating disaster – be it human or natural, the downside risks of not planning for crisis with a gendered lens have been very often, unfortunately, made starkly clear. From loss of employment, increased burden of care and greater cases of domestic abuse, women suffer disproportionately, the world over, post disasters. The question now remains: should such gender-neutral thinking still find a place in crisis management and recovery policies? While economic growth and progress give an aggregative push upwards for all, the impacts of a crisis are selective in terms of who bears the brunt of suffering. Nothing reflects this scenario better, on a global scale, than the impacts of the COVID-19 pandemic on women.

According to a joint report by the World Health Organization and Women in Global Health, women comprise the bulk of the world's frontline health workers – approximately 70 percent of the global health workforce – and they have been at significant risk of infection. However, they represent just a quarter of senior roles in the health industry. Given their predicaments, from ill-fitting personal protective equipment (PPE) to their constant risks of exposure and increased workload, women have not occupied the right 'space' to make decisions around their own safety and wellbeing as healthcare and frontline workers. The rise of domestic violence is another well-documented impact of COVID-19. The Association of Women for Action and Research (AWARE), a women's rights group in Singapore, has reported increases in the number of family violence calls since the country's lockdown began in April 2020, with a 137 percent increase in May 2020. In Indonesia, the Legal Aid Foundation of the Indonesian's Women's Association for Justice

Women's equality
Photo credit: Stephan Bachenheimer, World Bank via Flickr, under Creative Commons licence

has had their domestic violence cases at least tripled two weeks after lockdown measures were imposed in Jakarta, the highest they have documented in a similar period. Similar statistics have been reported in many parts of the world.

Women's Economic Empowerment

A UN analysis of the impact of the COVID-19 pandemic on women has identified key areas that leave women and girls most vulnerable, including unemployment and economic livelihood impacts for the poorest women and girls. Tens of thousands of female workers are concentrated in the informal sector, including domestic work, working for family members, and as seasonal agricultural workers. There is a huge task ahead for governments to economically rehabilitate these women and provide safety nets, if necessary, to reintroduce them into their economies once again. On the other hand, with changes in work practices, there is another area of concern for women's economic security.

In some cases, gender stereotypes or 'expected behaviours' in projected education trajectories have resulted in deepening gender equality by limiting women's career progressions, especially in the fields of science and technology. According to the Global Gender Gap Report of 2020 by the World Economic Forum, the gender gap in STEM (Science, Technology, Engineering and Mathematics) education in countries, such as Thailand, is glaringly obvious where males represent 44.26 percent of the enrolment while females are only 14.98 percent, although the literacy rates of females (91.2 percent) and males (94.7 percent) are almost the same. These statistics already presented a problem for women in the workforce pre-pandemic. Now with the stress on digitisation and the importance on STEM occupations, women are at a greater disadvantage. With traditional 'female occupations' like teaching, sales, administrative work and even counselling increasingly moving online, first as a necessity in pandemic times, and now possibly, as a mainstay, those without the resources and training, most often women, can easily be replaced. This economic gender gap must be addressed, especially when workplace equality should be a policy choice to achieve sustainable economic growth, post-COVID-19.

In a 2018 McKinsey's report on gender parity in the Asia-Pacific, specifically to this part of the world, eight ASEAN countries are projected to experience economic growth if gender equality for women is promoted. Thailand and Cambodia got the top spot in the forecast, in which the two countries are predicted to gain a GDP increase of 11.9 percent by 2025 if gender equality is improved. Vietnam got the second spot, with 9.8 percent, followed by Indonesia (8.9 percent), Malaysia (8.2 percent), Myanmar (7.7 percent), the Philippines (7.2 percent), and Singapore (5.4 percent). Moreover, women can also be a driver of ASEAN's burgeoning e-commerce. The International Finance Corporation's report reveals that ASEAN's e-commerce market could grow by more than US$230 billion by 2030 if more women entrepreneurs are involved in the major online shopping marketplaces.

Women in a Post-Pandemic World

Many were quick to point out that countries headed by female leaders were effective in taking action and doing the necessary in terms of shutdowns and pandemic preparedness. While many would like to claim the positive impacts of female leadership, and there are many positives, it is the openness of societies where such leadership prevails that is crucial, the abilities and strengths of these leaders notwithstanding. Such societies tend to be open to diverse and varying ideas and abilities and extract the best from a varied pool of talent. Such societies have no reservations about placing women in leadership roles. They are genuinely inclusive and welcome a plurality of voices and ideas. Therefore, they tend to do better in decision-making under difficult circumstances leaving few 'outliers' in plans and programmes that try to manage and mitigate impacts. Where we seek to rebuild and recover, women, as active members of the labour force, as heads of families, as educators, as political leaders, and as citizens, should not be sidestepped in planning for the 'new normal'.

We have seen what existing gender-neutral crisis management policies have resulted in. Many are still living with the effects of it. It should therefore be the goal of any nation hoping to recover at the soonest to make women's empowerment part of new structures of governance. Although gender mainstreaming and gender equality programmes exist at different levels of governance, from global to regional to national, it would require a shift in the collective social psyche to make a difference. This would require concerted efforts at re-imagining gender roles and recalibrating social policies around a more gender-specific/gender-informed rather than a gender-neutral angle. Ultimately, these efforts should lead to a reassessment of the importance of women's roles in the economy, which includes formalising, by any means possible, their active and sustained involvement in the rebuilding and recovery of their nations.

Through the Cracks: How Migrants Cope During the Pandemic

S Nanthini

Since its emergence in December 2019, the COVID-19 pandemic has disrupted almost every part of modern life – from the way we work to travelling. In particular, the pandemic has also exposed societal gaps, disproportionately affecting already vulnerable communities such as migrants. According to the International Organization for Migration, there were 281 million international migrants in 2020. With the COVID-19 pandemic coming at a time when global migration flows are at an all-time high, its effect on migrants have become particularly stark.

Worldwide travel has since slowed to a trickle with 229 countries, territories and areas still with various forms of restrictions and/or conditions for entry. This has affected the ability of migrants to travel, with some estimates suggesting that the pandemic may have slowed the growth of the number of international migrants by around two million by mid-2020, 27 percent less than expected since mid-2019. The pandemic's disruption of human mobility, job security and overall well-being of labour migrants have caused them to be disproportionally affected, particularly the low-wage, temporary migrants.

Travel (or the Lack of) During the Pandemic

The restrictions and conditions placed on travel and entry have particularly affected labour migrants, irregular or otherwise, with their ability to earn limited. A major fear during the beginning of the pandemic was its effect on remittances, with 33 percent of migrant workers in 2019 and three of the top five remittance recipient countries from the Asia-Pacific. Any potential decrease in remittances could be disastrous – especially to poor households. Although overall remittances to the region dipped slightly in contrast to the steady growth it has been experiencing over the last few years, countries such as Thailand and Vietnam seemed to have experienced an increase in remittances. This resilience may be fuelled in part due to the desire of these labour migrants to help their families at home in times of trouble. However, should travel be restricted for much longer, even these positive signs are unlikely to remain. With most migrants in the region being temporary migrant workers, the loss of jobs and wages among them have been particularly high. This will further endanger progress made in poverty reduction. According to World Bank estimates, the global extreme poverty rate has increased for the first time since 1998 due to the likelihood of between 71 million and 100 million people being pushed into extreme poverty in 2020.

Access to Vaccines

With the rise of the Delta variant, more countries are implementing vaccination mandates on their populations with some also implementing vaccine passport systems, requiring individuals to show proof of full vaccination or a negative COVID-19 test in order to enter particular areas. While not many countries are limiting entry to only vaccinated travellers, most have partially restrictive travel regulations such as the requirement of a negative COVID-19 test as a condition of entry. Although vaccines against COVID-19 have been made available, not everyone has equal access to COVID-19 vaccines and/or COVID-19 testing capabilities. As such, labour migrants with limited capacities to access vaccines and/or testing requirements would be disproportionately affected, further limiting human mobility.

Access to Healthcare

Another troubling issue facing migrants is their access – or lack of – to proper healthcare. Although migrants face the same health threats from COVID-19 as their host populations, they are particularly vulnerable due to potential discriminatory measures. This is further heightened for low-skilled, low-paid migrants. With most of them drawn to urban centres in search of work, they also tend to live in overcrowded facilities with poor sanitation – making them more vulnerable to the spread of disease. While these migrant workers are vital to the overall infrastructure of the countries where they work, their low status among the community, language barrier and high costs limit their ability to access services such as legal services and especially, healthcare.

As such, equitable vaccine distribution is especially vital to these communities. Although there has been constant emphasis to vaccinate the entire population

in a jurisdiction in order to avoid a small cluster of non-vaccinated people undermining herd immunity, not all countries are including regular migrants in their national vaccination campaigns – let alone refugees, asylum seekers or irregular migrants. Moreover, even in countries which grant migrants access to vaccines, in-practice inclusion may differ from official policy. This could be due to a number of reasons including a lack of clarity in national vaccine deployment plans, policymakers avoiding publicising this access to avoid xenophobic reactions from the public, and the inability of migrants to have the required documents.

In Malaysia, the new Health Minister has recently assured irregular migrants that COVID-19 vaccines are available to everyone in the country regardless of their documentation status. While this is a welcome indication from the new government, irregular migrants are unlikely to come forward unless there are concrete actions backing these statements. After all, despite similar statements made in February 2021, the previous government reversed that policy in May 2021, cracking down on 'undocumented' migrants. However, in some countries, migrants – particularly those working in front-line, high-risk areas – have been prioritised. For example, in 2020, Singapore experienced a sudden massive surge in COVID-19 cases among its migrant worker population. In order to prevent another similar situation, Singapore included migrant workers in the early parts of its national campaign along with other workers in critical functions.

COVID-19 has exposed the gaps in our system. It has highlighted the critical role of migrant workers in the region as well as the vulnerabilities they are subject to. As such, this may be an opportune moment for national, regional and international bodies to use this momentum to move migrant rights forward. While the creation of effective vaccines has offered us a cautious glimpse of the light at the end of the tunnel – of finally emerging from this pandemic – it is important to keep in mind the need for equity in any response to the pandemic. After all, COVID-19 has taught us that until all people – including those most vulnerable – are well-protected, the journey towards 'New Normal' will be slow and frustrating.

Relief assistance to stranded migrant workers in Bangkok
Photo credit: ILO Asia Pacific via Flickr, under Creative Commons license

Myanmar: Time for New Regional Diplomacy

Alistair D. B. Cook

The detention and arrest of elected politicians, officials, community leaders along with a military coup in Myanmar on 1 February 2021 demonstrated the fragility of the supposed transition to democracy. Responses from the international community have so far generated toothless statements of concern with some pursuing sanctions.

Only New Zealand has suspended diplomatic relations. The international community needs to reflect on its limited actions to date and recognise the changed dynamics in Myanmar, all within the context of a fractured multilateral world.

Regional Focus

Since the military coup, countries around the world have delivered a series of statements ranging from condemnation to comments about these developments being an internal affair. There is nothing new here about which countries fell on what side of that debate.

One of the first statements was delivered on 1 February by Brunei, the ASEAN Chair for 2021, referencing the ASEAN Charter, the need for political stability and the pursuit of dialogue. Within ASEAN, individual statements calling for a return to normalcy came from Indonesia, Malaysia and Singapore in contrast to the notable positions of Cambodia, Philippines and Thailand asserting it as a matter of Myanmar's internal affairs.

While the ASEAN Charter is legally-binding, enforcement needs the collective support of the 10 member states. Within the ASEAN Charter there are provisions for the activation of the good offices of the Secretary-General to engage member states such as that of Surin Pitsuwan in the aftermath of Cyclone Nargis in 2008. It took nearly twelve weeks for ASEAN to agree to a Five-Point Consensus at an ASEAN high-level summit on the situation in Myanmar on 24 April.

We have also witnessed shuttle diplomacy of regional political figures in past political crises. In the aftermath of the 1 February coup we saw shuttle diplomacy on display with Indonesian Foreign Minister Retno Marsudi and Thai Foreign Minister Don Pramudwinai meeting with the Myanmar military. The subsequent nine months did not

2021 Special ASEAN Summit on Myanmar's coup d'état
Photo credit: Office of Indonesian Foreign Minister via Wikimedia Commons

see progress on finding political resolution. While ASEAN member states have the process to facilitate action, the diversity of opinion within the regional grouping means a more bespoke approach is required.

International Interests

As many observers have noted, the military removal of the elected government in Myanmar has implications beyond ASEAN. China is deemed a key supporter of Myanmar and Beijing enjoyed a relatively productive and stable relationship with the National League for Democracy (NLD) government under the leadership of Aung San Suu Kyi.

Russia has emerged as a key security partner over the past decade for major arms imports and military training to the Myanmar military. The reliance on Moscow's support and engagement is perceived as a calculated move by the Myanmar military to counter rising dependence on China as a result of deteriorating relations with the United States and other international players.

The US under the new Biden administration has announced sanctions against Myanmar's military leaders, family members and their business interests. These targeted sanctions reflect a calibrated response as it weighs US options and interests regarding its relations and leadership in the wider Indo-Pacific region. The US may well look to regional partners and allies to provide a more collective, or at least coordinated, response.

Japan has invested significantly in Myanmar, and more so under the partially civilian government led by the NLD. Tokyo wants peace and stability in the country. The Japanese government has displayed a keen interest in mediation in Myanmar in previous crises but this has not materialised in 2021.

Australia signed a large aid package and increased its engagement with ASEAN. Canberra is keen to activate its role as a regional player to support a peaceful resolution of the political turmoil and transition to democracy in Myanmar.

Immediate neighbour India has issued a broad statement supporting the democratic transition in Myanmar. New Delhi has been cautiously watching developments in Myanmar and avoiding saying more since the two countries' military forces are delicately negotiating more security along their common borders.

Regional Diplomacy: ASEAN+ Model for Reconciliation?

Australia, China, India, Japan, Russia and the US are all important partners for Southeast Asian economic development and regional security. While each of them has diverging interests, it is in their common interest to support the peaceful resolution of the political turmoil in Myanmar.

With Japan and Australia as likely partners, efforts to coordinate an effective response may lie in Jakarta. Indonesia is the largest country in ASEAN, has evolved from its own authoritarian past, and is an essential part of the envisioned ASEAN Community. The Indonesian experience was studiously examined by the Myanmar military leaders in their own democratisation process.

With its substantial bilateral relationship with Australia and successful partnership with Japan, the Indonesians can activate a diplomatic coalition with ASEAN characteristics to pave the way for dialogue, peaceful resolution and avoid more bloodshed. It behooves ASEAN member states as well as other regional countries to encourage such an initiative for reconciliation and unity.

Reimagined Myanmar?

A practical coalition of willing ASEAN member states and regional partners presents a pathway to support the people in Myanmar and promote greater stability across the region. Will it be enough to reconcile the opposing forces and continue the transition to democracy in Myanmar? The answer lies in what the alternative is.

The fact is an entire generation of young people in Myanmar has come of age since the 2008 constitution. They are internet-savvy and energetic. Their quenchless desire for change and a viable future cannot be dismissed any longer. At the international level, the COVID-19 pandemic is still raging and the world order is under stress from a multitude of structural issues and geopolitical dilemmas.

The challenges faced by Myanmar and ASEAN cannot be attended to in a half-hearted way with worn-out ideas and pessimism. It is time for substantive and creative regional diplomacy if the region is to move from a subdued interval to a sustainable future that delivers people-centred peace and security.

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Council for Security Cooperation in the Asia-Pacific (CSCAP) Nuclear Energy Experts Group (NEEG), 28 - 29 Sep 2021, online

RSIS Webinar on "Non-Traditional Security Concerns in the New Normal: Part 2", 20 September 2021, online

ASEAN Strategic Policy Dialogue on Disaster Management (SPDDM) 2021, 24-26 August 2021, Singapore Civil Defence Force Headquarters,

RSIS World Humanitarian Day 2021 Webinar, 19 August 2021, online

RSIS Webinar on "Nuclear Security Governance in the Asia-Pacific: Pathways to Cooperation", 29 July 2021, online

RSIS Webinar on "Climate Change and Communities - a Human Security Perspective", 28 July 2021, online

RSIS Webinar on "Non-Traditional Security Concerns in the 'New Normal': Part I", 1 June 2021, online

RSIS-SPRINGER Book Launch Webinar of "Humanitarianism in the Asia-Pacific: Engaging the Debate in Policy and Practice", 19 May 2021, online

RSIS-RHCC Workshop on Humanitarian Futures in the Asia-Pacific (Day 2 of 2), 31 March 2021, Changi Regional HADR Coordination Centre (RHCC)

The 5th NTS-Asia Consortium Annual Meeting "Asian Security in a Post-COVID-19 Environment", 13-15 April 2021, online

RSIS Virtual Roundtable on "COVID-19 in Asia: Reflections One Year On", 19 March 2021, online

RSIS-ICRC Data Governance and Protection in Humanitarian Action Online Workshop 2021, 19 March 2021, online

RSIS-RHCC Workshop on Humanitarian Futures in the Asia-Pacific (Day 1 of 2), 16 March 2021, Changi Regional HADR Coordination Centre (RHCC)

RSIS Webinar on "Disaster Governance and Prospects of Inter-Regional Partnership in the Asia-Pacific", 25 February 2021, online

Research Grants

The Humanitarian Assistance and Disaster Relief Programme of the NTS Centre was the consulting partner for the publication ASEAN Disaster Resilience Outlook launched during the 39th ASEAN Committee for Disaster Management Meeting on 14th October 2021.

The NTS Centre has received a grant from the Department of Foreign Affairs and Trade of Australia to undertake research on marine environmental issues in Southeast Asia under the project titled "Indo-Pacific Oceans Initiative Partnership Baseline Study on regional collaborative arrangements in marine ecology: Options for the Indian Ocean". This project is in collaboration with the Australian Strategic Policy Institute, the Chesterfield Lane Pte Ltd, Australia, and the Observer Research Foundation in India.

About The S. Rajaratnam School of International Studies

The S. Rajaratnam School of International Studies (RSIS) is a think tank and professional graduate school of international affairs at the Nanyang Technological University, Singapore. An autonomous school, RSIS' mission is to be a leading research and graduate teaching institution in strategic and international affairs in the Asia Pacific. With the core functions of research, graduate education, and networking, it produces research on Asia Pacific Security, Multilateralism and Regionalism, Conflict Studies, Non-traditional Security, Cybersecurity, Maritime Security and Terrorism Studies.

For more details, please visit www.rsis.edu.sg. Follow us at www.facebook.com/RSIS.NTU or connect with us at www.linkedin.com/school/rsis-ntu.

About the Centre for Non-Traditional Security Studies (NTS Centre)

NTS Centre conducts research and produces policy-relevant analyses aimed at furthering awareness and building the capacity to address non-traditional security (NTS) issues and challenges in the Asia Pacific region and beyond. The Centre addresses knowledge gaps, facilitates discussions and analyses, engages policymakers, and contributes to building institutional capacity in Sustainable Security and Crises. The NTS Centre brings together myriad NTS stakeholders in regular workshops and roundtable discussions, as well as provides a networking platform for NTS research institutions in the Asia Pacific through the NTS-Asia Consortium.

Our Research Areas

- Sustainable Security
  - Climate Security
  - Food Security
  - Economic Security

- Crises
  - Humanitarian Assistance and Disaster Relief
  - Pandemics
  - Nuclear Hazards

Our Output

Policy Relevant Publications

The NTS Centre produces a range of output such as research reports, books, monographs, policy briefs and conference proceedings.

Training

Based in RSIS, which has an excellent record of postgraduate teaching, an international faculty and an extensive network of policy institutes worldwide, the NTS Centre is well-placed to develop robust research capabilities, conduct training courses and facilitate advanced education on NTS. These are aimed at, but not limited to, academics, analysts, policymakers and non-governmental organisations (NGOs).

Networking and Outreach

The NTS Centre serves as a networking hub for researchers, policy analysts, policymakers, NGOs and media from across Asia and further afield interested in NTS issues and challenges.

The NTS Centre is the founding member of the Asia Pacific Partnership for Atrocity Prevention, inaugurated 7-8 November 2016. RSIS co-hosted with the Asia Pacific Centre for the Responsibility to Protect (APR2P), School of Political Science and International Studies, University of Queensland St. Lucia, the 'High Level Advisory Panel's (HLAP) Report on Mainstreaming the Responsibility to Protect in Southeast Asia: Pathway Towards a Caring ASEAN Community.' This was to generate comments and inputs from the participants on how the HLAP Report on mainstreaming the Responsibility to Protect and mass atrocities prevention can be promoted in ASEAN, as well as in operationalizing the Report's recommendations in the domestic and regional contexts. Previously, it served as the Coordinator of the ASEAN-Canada Research Partnership (2012-2015) supported by the International Development Research Centre (IDRC), Canada. It also serves as the Secretariat of the initiative. In 2009, the NTS Centre was chosen by the MacArthur Foundation as a lead institution for its three-year Asia Security Initiative (2009-2012), to develop policy research capacity and recommend policies on the critical security challenges facing the Asia-Pacific. It is also a founding member and the Secretariat for the Consortium of Non-Traditional Security Studies in Asia (NTS-Asia Consortium). More information on the NTS Centre is available at: http://www.rsis.edu.sg/research/nts/.

About The NTS-Asia Consortium

The NTS-Asia Consortium was launched in January 2007 as a network of NTS research institutes and think tanks. The aims of the consortium are as follows:

- To develop a platform for networking and intellectual exchange between regional NTS scholars and analysts.
- To build long-term and sustainable regional capacity for research on NTS issues.
- To mainstream and advance the field of NTS studies in Asia.
- To collate and manage a regional database of NTS publications and other resources.

NTS issues include the challenges to the survival and well-being of peoples and states that arise from nonmilitary sources, such as climate change, resource scarcity, infectious diseases, natural disasters, irregular migration, food shortages, people smuggling, drug trafficking and transnational crime. These dangers are transnational in scope, defying unilateral remedies and requiring comprehensive – political, economic and social – responses, as well as the humanitarian use of military force. NTS studies also look at the multidimensional civilian angle to security in conjunction with state, military and governmental actors.

Inaugural Meeting of The Consortium of Non-Traditional Security Studies

The Inaugural Meeting of the Consortium of Non-traditional Security Studies in Asia (NTS-Asia) from the 8th to 9th January 2007 was a milestone in the progress of NTS studies. The meeting not only officially launched the Consortium but also brought together its pioneering network members - comprising 14 research institutes and think tanks from across Asia - to discuss current NTS challenges facing the region, and possible policy responses to address these problems.

The pioneering members of NTS-Asia are as follows:

South Asia

- Bangladesh Institute of International and Strategic Studies, Bangladesh (BIISS)
- Women in Security, Conflict Management and Peace, India (WISCOMP)
- Centre for the Study of Developing Societies, India (CSDS)
- Refugee and Migratory Movements Research Unit, Bangladesh (RMMRU)
- Regional Centre for Strategic Studies, Sri Lanka (RCSS)

Northeast Asia

- Institute of Asia-Pacific Studies, Chinese Academy of Social Sciences (CASS)
- Ilmin International Relations Institute, Korea University
- Center for International Security and Strategic Studies, Institute of World Economics and Politics (IWEP), Vietnam
- Beijing Foreign Studies University (representing IWEP China)
- Centre of Asian Studies, University of Hong Kong

Southeast Asia

- Centre for Strategic and International Studies, Indonesia (CSIS)
- Institute for Strategic and Development Studies, Philippines (ISDS)
- The World Fish Center, Malaysia
- S. Rajaratnam School of International Studies, Singapore (RSIS)

NTS-Asia Relaunch 2016

The RSIS reactivated the NTS-Asia Consortium in early 2016 with the aim to re-establish the Consortium's significance and value to NTS research in the region, and to reemphasize the increasingly relevant and urgent need to focus on transnational and multilateral non-traditional security issues. The primary platform for the Consortium communication and outlet of publication is the NTS-Asia Website. The Website is envisioned to be the one-stop platform for NTS issues. See website link below: http://rsis-ntsasia.org/

NTS-Asia Secretariat

The RSIS NTS Centre functions as the Secretariat of the NTS-Asia Consortium. Led by Professor Mely Caballero-Anthony, Head of the Centre for Non-Traditional Security (NTS) Studies at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University, Singapore and supported by Ms Margareth Sembiring, Associate Research Fellow, and Ms Joey Liang, IT Executive and Webmaster.

NOTES

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