



2025

YEAR IN REVIEW

Centre for Non-Traditional Security Studies

RSiS

Nanyang Technological University, Singapore

S. RAJARATNAM
SCHOOL OF
INTERNATIONAL
STUDIES



**NANYANG
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SINGAPORE

CENTRE FOR
NON-TRADITIONAL
SECURITY STUDIES
YEAR IN REVIEW 2025

CENTRE FOR NON-TRADITIONAL SECURITY STUDIES,
S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES,
NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

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

Dear Readers,

This past year was shaped by the intensification of geopolitical competition, a changing global order, protracted conflicts in Myanmar, Gaza and Ukraine, and the worsening impacts of climate change. Amid these developments, there is an urgent need for states to attend to and address non-traditional security (NTS) concerns, such as food security, the energy transition and climate security, that transcend national borders. The acceleration of technologies, especially artificial intelligence (AI), has also introduced new risks and opportunities for growth.

Cooperation across nations on NTS issues serves as a vital means of fostering a more resilient international community, providing opportunities for states to work together to better address NTS threats including future pandemics, the climate crisis and food insecurity. In ASEAN, deeper integration and collaboration on NTS issues, including initiatives such as the ASEAN Power Grid and the ASEAN One Health Network, help build a stronger regional architecture for navigating an increasingly uncertain geopolitical landscape.

With the shutdown of the US Agency for International Development (USAID) and the acceleration of great power rivalry between the US and China, the international community stands at a critical juncture. Now more than ever, ASEAN Member States must double down on their regional cooperation and recognise that progress, particularly toward the Sustainable Development Goals (SDGs), can only be achieved when no one is left behind.

The NTS Year In Review 2025 from the RSIS Centre for Non-Traditional Security Studies (NTS Centre) brings together a series of articles that examine emerging NTS challenges in light of the evolving geopolitical environment, ongoing conflicts, and rapid technological advancements worldwide. We hope that the 2025 NTS Year In Review will provide readers and policymakers with fresh insights and perspectives to better understand the risks arising from NTS threats.

Looking ahead, the NTS Centre will continue to expand its research that is policy-oriented and cutting-edge, as well as to contribute to the wider academic discourse, focusing on biosecurity, climate, water, energy and food security issues, planetary health, nuclear energy, and women, peace and security (WPS), and their respective implications on the social and economic resilience of ASEAN Member States. We welcome your feedback and suggestions on the work of RSIS and the NTS Centre.

Thank you.



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,

Beyond traditional security concerns, international peace and security hinge on the capacity of regional, national and local actors to effectively address non-traditional security (NTS) issues, which pose existential threats to communities, ranging from climate change and natural hazards to food shortages, pandemics, and displacement. NTS challenges transcend national borders and therefore require integrated national, regional, and global solutions to address their far-reaching impacts.

Additionally, this should be done in a way that benefits the wider international community. Tackling NTS issues, such as climate and food security, constitutes a global public good that uplifts all segments of society. While recent geopolitical developments and conflicts have highlighted the gaps and limitations of multilateral governance, there remains a need for multilateral governance mechanisms that facilitate closer cooperation between states to provide global public goods that are inclusive, equitable and sustainable. A developmental approach is crucial for the continued progress of states in the Global South, with effective strategies to address NTS threats being essential for achieving the Sustainable Development Goals (SDGs).

In Southeast Asia, integrating a developmental approach to address NTS challenges is reflected in the region's notion of comprehensive security—a shared security concept among ASEAN Member States. An important element of this concept is building “regional resilience” as a means to achieve comprehensive security. This approach will allow the region to withstand the major challenges facing the global community, which include shocks from geopolitical headwinds, the cascading threats of climate change, and biological and health-related risks. The region is particularly vulnerable to natural hazards. Climate change is likely to increase both the frequency and severity of these events, resulting in damaging impacts on communities, including economic insecurity, loss of livelihoods, forced migration, and emerging infectious diseases. Climate change has also had an impact on agricultural production, leading to rising food prices and undernourishment. It is therefore essential that climate security be prioritised and mainstreamed into all facets of regional governance, including the low-carbon energy transition and efforts to reduce carbon emissions.

Adopting frameworks such as Planetary Health allows for a more holistic approach to addressing the triple planetary crisis: climate change, pollution and biodiversity loss. The region also must be better prepared for future infectious disease outbreaks, including pandemics, as well as be aware of the security challenges arising from the rapid technological advancement of biotechnology, with particular attention to dual-use research and the management of biosecurity in laboratories. Human security and the protection of vulnerable groups must also be upheld. The advancement of the Women, Peace and Security (WPS) agenda has empowered women across the region to play an invaluable role in peace processes.

The NTS Year in Review 2025 features articles which examine the impact of current and emerging NTS challenges in the region. We hope that you will find these articles useful in offering diverse perspectives on the way forward and a deeper understanding of the threats we face.

At the Centre for Non-Traditional Security Studies, we remain committed to conducting policy-relevant research on emerging NTS issues and their regional implications. We value any feedback you may have and look forward to engaging with you on our research areas.



Professor Mely Caballero-Anthony

Head

Centre for Non-Traditional Security (NTS) Studies

S. Rajaratnam School of International Studies (RSIS)

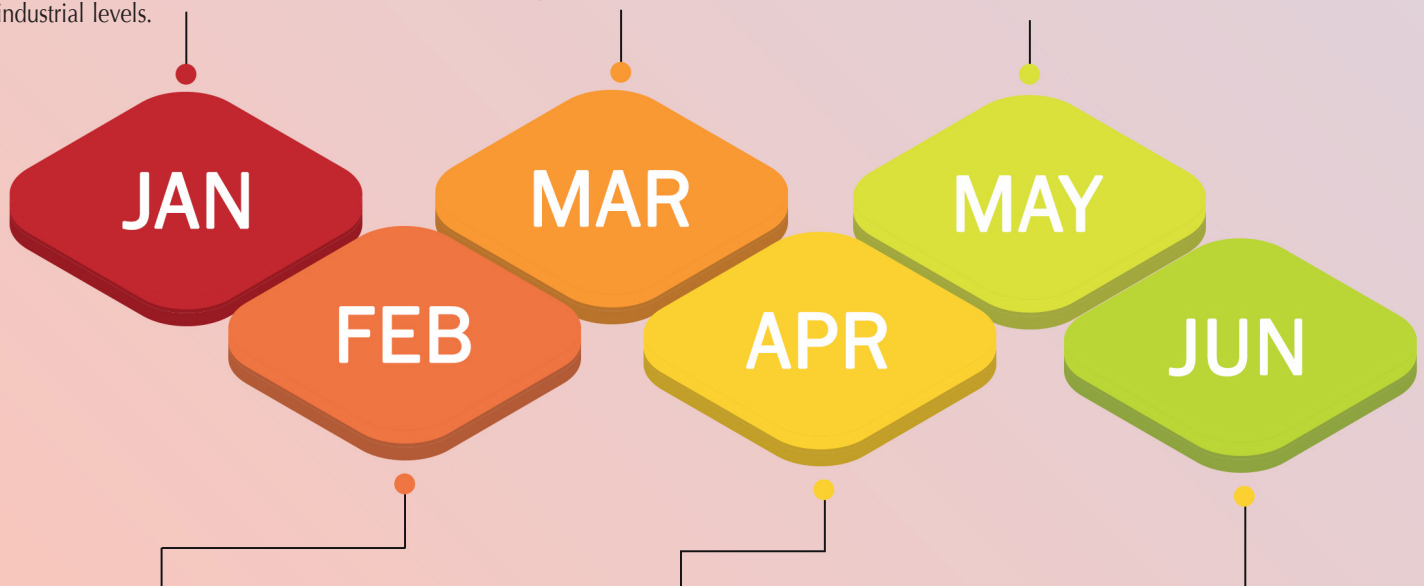
Nanyang Technological University, Singapore

Key NTS Events 2025

- Domestic pressure in Chinese social media culminated in a crackdown of scam centres in Myanmar with the involvement of authorities from China, Thailand and Myanmar, leading to thousands of trafficking victims being rescued in the early parts of the year.
- Massive wildfires erupted in California, US, marking another sign of a deteriorating environment in the current climate crisis. Fatalities, mass evacuations and large-scale environmental losses underscored the principles of planetary health, highlighting the interconnectedness between human well-being and the state of natural systems.
- On January 20, the start of the second Donald Trump Administration signalled a shifting global agenda, marked by US withdrawal from the Paris Agreement and the World Health Organisation (WHO). These reversals highlighted a wider trend of the current administration to deflect from multilateral engagements and NTS issues, including climate and health governance.
- The warmest January on record was measured, with a rise of 1.75 degrees Celsius from pre-industrial levels.

- The acceleration of a measles outbreak in the US was reported. Marking a significant increase since 2024, the previously eliminated disease in the country had its first deadly cases since 2015, highlighting deficiencies in public health governance and the effects of reduced vaccine rates.
- Updated data from the International Organisation for Migration (IOM) highlighted 2024 being the deadliest year on record during paths of migration. Continuing a five-year trend, the data highlighted shortcomings in existing search and rescue systems, and inadequate protection along migration routes.

- Following the January 2025 Kampala Declaration on Building Resilient and Sustainable Agrifood Systems, the Comprehensive African Agricultural Development Programme (CAADP) outlined a 10-year plan for the African Union to transform its pan-continental agrifood systems and address challenges of climate change, population growth, and technological shifts. A US\$100 billion in public-private investment by 2035 was pledged towards this goal.
- On May 16, the annual Global Report on Food Crises (GRFC) conducted by Food Security Information Network highlighted over 295 million people experiencing acute food hunger in 2024. The number marked a sixth consecutive year of rising food insecurity, heightened by major conflicts in Gaza and Sudan.
- On May 20, members of the World Health Organization (WHO) formally adopted the Pandemic Agreement. Drawing on COVID-19 and following over three years of negotiations, critical principles of the agreement include improved international coordination, information sharing and equitable access to public health resources.



- On February 5, the 2025 Partnership Forum of the Economic and Social Council (ECOSOC) was held at the United Nations (UN) headquarters in New York. Focusing on the 2030 Agenda and guided by its Sustainable Development Goals (SDGs), the Forum stressed the importance of fostering greater inclusivity and made notable progress on progressing innovative multi-stakeholder partnerships.
- 95 per cent of states globally missed critical deadline submitting plans for carbon emissions cuts for the next decade as part of preparation for the annual United Nations Framework Convention on Climate Change Conference of the Parties (COP30). The limited action raised questions on whether global climate action had stalled.
- Reports of an unidentified deadly disease outbreak in the Democratic Republic of Congo drew global attention. By February 25, 53 people had passed away from the disease out of 1,318 infected, disproportionately affecting younger age groups.

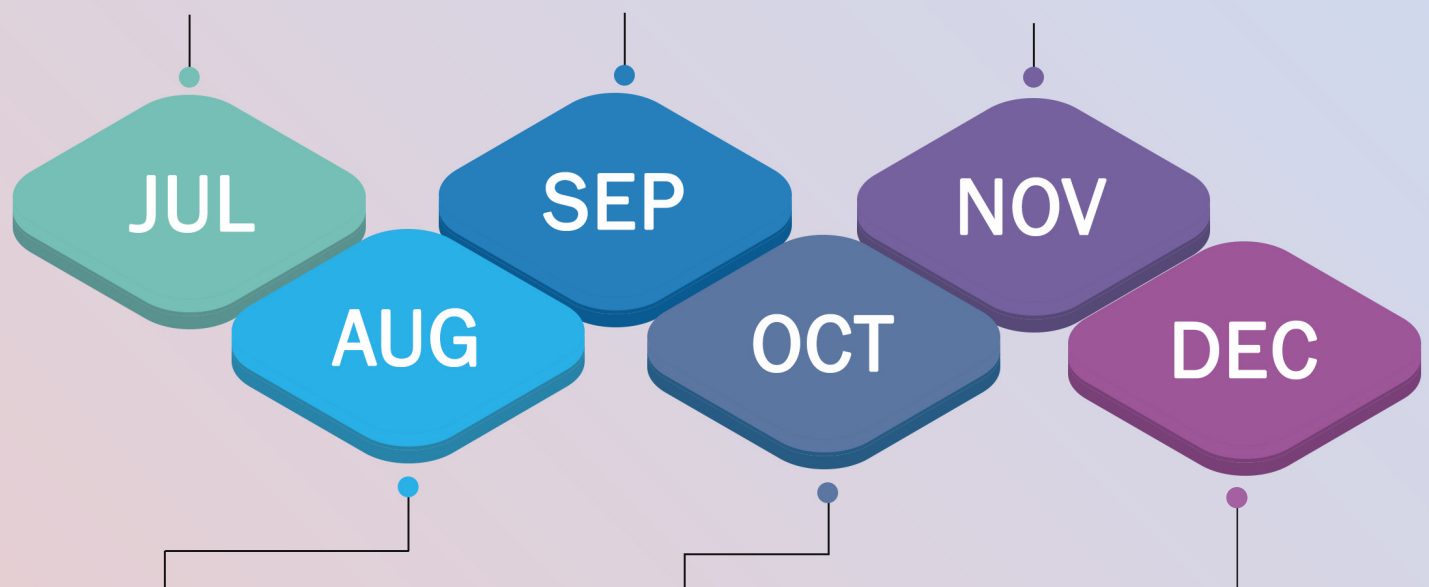
- On April 2, the US launched near-global tariffs on foreign goods, causing supply chain volatility. The move sparked noticeable food and economic insecurities, including for Southeast Asia, where rising competition increased import prices of staple foods and affected a major food export destination.
- On April 21, major US tariffs on solar panel products were placed on Southeast Asian countries. With Southeast Asia closely tied to US clean energy imports, the tariffs represented a setback for both the regional and global energy transition.
- On April 30, the US finalised a multi-billion USD mineral agreement with Ukraine. The deal demonstrated increased global demand for critical minerals for modern technology components and as part of the clean energy surge, heightened by the rapid expansion of AI.

- On June 16, applications for the world's first climate visa programme advanced a 2023 Australia-Tuvalu treaty. With major parts of Tuvalu expected to submerge in the upcoming decades, 280 Tuvaluans will annually be granted Australian permanent residency. Over 80 per cent of its population applied in the first round.
- On June 26, the World Bank and the International Atomic Energy Agency (IAEA) signed an agreement on advanced nuclear energy in developing countries—the first since the World Bank ended its near-six decade-long ban on nuclear energy projects. The agreement targets boosting electrification amid rising energy demands.
- Renewed heatwaves across Europe caused 2,300 deaths across 12 major European cities, with a majority linked to exacerbated effects of climate change.

- Increasing reports of H5N1 avian influenza cases were reported in Cambodia. Previously eradicated and with a reported 44 percent fatality rate, concerns linked to transparency, biosecurity and disease outbreak preparedness were raised.
- On July 28, the UN released its annual State of Food Security and Nutrition report for 2025. The report highlighted a global decrease in hunger by 0.3 points to a new level of 8.2 per cent. However, increased hunger rates were found in most subregions of Africa and western Asia, with extreme weather events and food supply chain disruptions from the war in Ukraine among contributing factors.
- On July 26, a resurgence of cholera in the Democratic Republic of Congo (DRC) and Republic of Congo led the latter country's Ministry of Health to declare a cholera epidemic. The disease is believed to have gained traction due to a mixture of low vaccination rates, ongoing conflict in the DRC, and floods.

- The UN High Seas Treaty, adopted in 2022, reached the ratification threshold to enter into force. Signed by 142 countries and the EU, the treaty aims to cover 30 per cent of the high seas to protect marine biodiversity, an increase from a previous 1 per cent. Provisions include mandatory environmental impact assessments before conducting deep sea mining, and improved transparency and resource sharing.
- The annual Climate Week NYC drew together various actors to enhance climate action. Coinciding with the 80th UN General Assembly meeting where Donald Trump launched a lengthy attack on environmental governance, the event underscored the growing role of markets in advancing clean energy and climate-resilient solutions.
- In late September 2025, super Typhoon Ragasa struck across East Asia, causing fatalities, mass evacuations and infrastructural damage. Ragasa was promptly followed by storm Bualoi replicating similar effects in the Philippines, Vietnam, and Thailand. Together, the two events claimed the lives of more than 100 people.

- Held from November 10 to 21 in Belém, Brazil, COP30 marked a divisive edition of the annual summit. In the absence of the US, wealthy nations committed to a tripled financial support for climate adaptation in developing countries, while negotiations again failed to secure a binding agreement on the phase-out of fossil fuels.
- In early November, Typhoon Kalmaegi triggered widespread destruction across the Philippines and Vietnam, particularly through strong winds and flooding. With more than 200 fatalities, and with severe damage to infrastructure and farmlands, the Philippines' state of emergency declaration highlighted a particularly heavy typhoon season in 2025, likely impacted by rising global temperatures.
- In the final days of November, a severe tropical storm, attributed to intensified water cycles from climate change, formed in the Malacca Strait caused large-scale devastation in Indonesia, Malaysia, and Thailand, claiming over 1,300 fatalities with displacing at least 4 million people, according to official statistics.



- On August 22, famine was officially declared in Gaza by the Food and Agriculture Organization (FAO). Large-scale risks of death from hunger and malnutrition were reported by several UN-tied bodies, stemming from extensive Israeli military action in Gaza and its blockade on humanitarian resources.
- The eight-year anniversary from the mass-exodus of Rohingya refugees from Myanmar was marked by both a Bangladesh-arranged conference and protest rallies near the world's largest refugee camp in Cox's Bazar, with renewed attention towards ongoing issues of forced recruitment, human rights violations and food insecurities facing the Rohingya population.

- The 3rd Global Conference on Biological Threat Reduction was hosted by the World Organisation for Animal Health (WOAH) from October 28 to 30. The first since 2017, the Conference assembled actors across various field to discuss prevention, preparedness and response to biological threats to global ecosystems.
- On October 26, the accession of Timor-Leste in ASEAN was completed. The event was celebrated as a successful case of regional integration, allowing for further cooperation within several key NTS issues, including climate change and transnational crime, as highlighted by Singaporean Prime Minister Lawrence Wong.

- From December 3 to 5, the International Atomic Energy Agency (IAEA) hosted its first International Symposium on AI and Nuclear Energy. The event brought together government representatives, international organisations and private actors to discuss how nuclear energy can respond to growing energy demands from AI data centres and how AI can be used to assist in developing nuclear technology.
- The 2025 Meeting of States Parties to the Biological Weapons Convention (BWC) took place from December 15 to 17 in Geneva, Switzerland. Delegates discussed strengthening BWC implementation amid recent developments in science and technology.

A Decade of Planetary Health: Learning from the Past and Securing Earth's Future

Peili Pey

The tenth anniversary of the Rockefeller Foundation-Lancet Commission on Planetary Health arrives at a critical moment. The concept of Planetary Health – an interdisciplinary field and social movement that recognises the deep connection between the health of human civilisation and the health of Earth's natural systems, on which human health depends – is more relevant than ever.

The Planetary Health framework is essential for an understanding of why siloed, short-sighted approaches to solving global problems have consistently failed. When environmental protection and economic development are viewed as separate goals, one is often sacrificed for the other, creating new crises in the process. History provides painful lessons on this recurring failure.

A Recurring Pattern of Destruction

In the 19th century, the American bison was driven from a population numbering tens of millions to near extinction. This was a direct result of a policy that equated “progress” with clearing the North American plains for settlement and industry. The rapid and widespread slaughter of the bison, a keystone species to the region, was systematically organised and executed. Hunted for its hide and bones, the bison's value was reduced to mere industrial inputs.

This historical event was a classic example of a society failing to see the systemic value of a natural resource. The focus was on immediate economic gain, with no regard for the long-term ecological and social devastation that would follow.

A similar logic has driven the rapid expansion of industrial-scale palm oil plantations across Southeast Asia. Fuelled by global consumer demand for an inexpensive and versatile commodity used in countless

products, vast tracts of the world's oldest rainforests have been cleared for oil palm cultivation. This deforestation is often framed as an engine of economic development and poverty alleviation for the region.

Today, there are echoes of this same logic of “short-term gains over long-term destruction” in the debate over deep-sea mining. Proponents argue that the seabed must be mined for minerals essential for the green energy transition. This narrative, like those before it, frames the issue as a simple choice between one environmental harm and another.

This framing, however, presents a challenging dilemma that may overlook more effective solutions. A Planetary Health perspective forces a more comprehensive and systemic consideration: Why are solutions to one crisis being pursued by creating another? The framework challenges an approach based on simple trade-offs, demanding instead an analysis of the root causes of unsustainable consumption.

The Price of Progress

The consequences of these narrowly defined decisions are never distributed equally. The near disappearance of the bison was a direct assault on the indigenous peoples of the North American continent, destroying their economies and health. Likewise, deforestation for palm oil has displaced local and indigenous communities, while the resulting transboundary haze from land-clearing fires has created numerous public health crises across Southeast Asia.

Similarly, the push for deep-sea mining places a heavy burden on climate-vulnerable Pacific Island nations. They face intense pressure to risk their primary natural and cultural heritage – the ocean – to supply minerals for a transition driven by and for developed nations.

Each of these examples cited has created a clear sacrifice by an identifiable group of people and their original way of life. To the affected communities, they paid the heaviest price of progress. This highlights the issues of equity and justice that Planetary Health seeks to address. Actual progress, such as a global green energy transition, cannot be built on harming those who are least responsible for the crises being faced.

Furthermore, these actions are taken with a poor understanding of the long-term risks. The 19th-century bison hunters had no idea of the ecological tipping point they were crossing. Today, scientists warn that there is a similarly poor understanding of the deep

sea's role in regulating the planet's climate. A lack of comprehensive knowledge of the impacts of large-scale machinery on the seabed could lead to irreversible ecological damage. Proceeding with deep-sea mining before this science is properly understood is a direct violation of the precautionary principle.

A Crisis of Governance

These recurring situations highlight the inherent challenges in global governance. The bison was destroyed in an era of a near-total governance vacuum. Today, institutions intended to govern the impact of ecologically extractive or damaging activities exist, but their effectiveness is questionable.

The International Seabed Authority (ISA), responsible for managing the deep seabed, faces a fundamental conflict of interest, tasked with both facilitating mineral exploitation and protecting the environment. Similarly, industry-led bodies like the Roundtable on Sustainable Palm Oil (RSPO) are often criticised for weak standards, conflicts of interest, and a failure to halt deforestation effectively.

These structural flaws raise critical questions about whether current global governance frameworks are truly fit for protecting the planet's shared resources for future generations.

Systemic Policy Through Interconnected Planetary Health Frameworks

To break this historical cycle, a shift from siloed problem-solving to integrated, systemic action is necessary.



Planetary Health concept seeks to address environmental concerns in view of human health goals.

Photo Credit: freepik.com, under Creative Commons license

A Planetary Health framework points towards three key areas for policy focus:

Adopt Integrated Impact Assessments

Governments and international bodies must move beyond narrow Environmental Impact Assessments. New projects should be evaluated with a Planetary Health lens, assessing their total, comprehensive, and interconnected impact on human health, social equity, biodiversity, and ecosystem stability before they are approved. This is required to provide an accurate assessment of the socioecological impacts that are not diminished in the face of short-term economic gains.

Ensure Justice and Equity in Resource Governance

Global governance frameworks must be reformed to prioritise the rights of the most vulnerable. This requires ensuring that local and Indigenous communities have a meaningful and empowered voice in decisions that affect their heritage, environments and livelihoods. The knowledge and experiences of indigenous communities are crucial to a deeper and more systemic understanding of the impacts of extractive activities. Principles such as "Free, Prior, and Informed Consent" must be made a binding requirement, not an optional guideline.

Champion Systemic Solutions and the Circular Economy

The long-term, effective, and sustainable solution to fossil fuel energy dependence is not to find new frontiers for extraction. Instead, it requires policies to fundamentally reduce wasteful production and the primary demand for virgin resources, even when expanding renewable energy infrastructure. Governments must accelerate investment and create strong policy incentives for the circular economy, fostering innovation in recycling, promoting reuse and repair, and designing systems that eliminate excess extraction of raw materials.

Conclusion

The extermination of the bison and the ongoing challenges of palm oil production serve as stark reminders of the consequences of failure. The ultimate test of the Planetary Health concept over the next decade will be its ability to ensure that humanity learns from its past and does not repeat its destructive mistakes on a planetary scale.

The Water Insecurity-Climate Change Nexus: A Looming Threat to Peace and Security in Southeast Asia

Julius Cesar Trajano and Adam X. Hansen

Water security issues amid the worsening impacts of climate change may create interstate tensions and localised peace and security issues. In April 2025, Thailand officially urged the Lao PDR to relocate its proposed Sanakham Hydropower Dam Project on the Mekong River to minimise the transboundary impacts on Thai communities, representing yet another contentious development.

The lack of effective flood control and water management can also fuel inherent societal tensions. In recent months, the Philippine government has faced public protests and dissatisfaction over massive corruption on flood control projects, primarily along the country's major river systems, following climate-induced extreme weather events this year that inundated urban and rural communities. Exacerbated by climate change, these pressures heightened local grievances, contestations and societal tensions.

Climate change pressures on water resources, especially from transboundary rivers, may also increase friction between neighbouring states. With 41 transboundary groundwater bodies across Southeast Asia, enhanced transboundary river management is a critical endeavour to preserve peace and security.



Manila Bay, one of the Philippines' strategic water ways.

Photo credit: Julius Cesar Trajano/NTS Centre

The Case of the Mekong River: Untamed Interests, Growing Tensions

At the intersection of water insecurity and climate change, the Mekong River remains a pivotal case. Critical to more than 70 million people across six countries, climate change is a reality that Mekong's stakeholders cannot ignore. Over the last five decades, the Mekong region has warmed by about 1.4 degrees Celsius. Communities are facing harsher heatwaves, unpredictable rainfall, and rising sea levels that are bringing salinity deeper into Vietnam's farmlands, weakening production along its crucial Mekong Delta "rice bowl".

Yet, the more than a thousand dams along the Mekong River have worsened conditions. Existing dams have further contributed to alterations of water flows for millions of people downstream, placing clean energy goals in contention with water security. Combined with the effects of climate change, changes in water flows have left local communities in Cambodia's vital Tonlé Sap with reduced fish stocks. Simultaneously, in Laos and Thailand, rising water levels from the prospective Sanakham dam are placing more than 62,500 people at risk. Ungoverned, these issues are estimated to displace 3.4 to 6.4 million people in the Lower Mekong Region by 2050.

As access to water becomes increasingly unstable, governments have been forced to prioritise their own interests, contributing to the ever-expanding push for hydropower along the river. Yet, this scenario further heightens interstate tensions. Vietnam's public concerns about the Cambodian Funan Techo Canal's impact on water flow into the Mekong Delta reflect unresolved ongoing high-level issues.

Presently, the Mekong River Commission (MRC) is the only transboundary water governance body in Southeast Asia to help states "cooperate better" in managing the Mekong River.

Nonetheless, concerns remain about the MRC's ability to address present and future issues effectively. Crucially, while the absence of strict enforcement mechanisms has incentivised state participation, it has not been able to mitigate the social and environmental consequences of hydro-projects.

Further, while the commission has successfully strengthened interstate ties, the influence of non-state actors remains limited. The lack of inclusivity limits the participation of those living along the river's banks, who are most affected by the changing climate and water flows. Presently, civil society actors, including the Living River Siam and the Rivers Coalition of Cambodia, are elevating issues faced by local riparian communities, providing a potential avenue for the MRC to pursue deeper engagement.

Water Insecurities and Security Challenges in Southeast Asia

Apart from the Mekong sub-region, water and climate insecurities are also intensifying throughout Southeast Asia. Perennial floods, droughts, and hydrological projects currently threaten water access and food production along the Irrawaddy River, having previously sparked protests in Myanmar in 2011.

Similar upstream developments in the Red River threaten food production in Vietnam, while looming Chinese and Burmese hydro-projects threaten communities along the Salween River, Southeast Asia's remaining undammed river.

In Indonesia, the climate crisis poses significant risks to agriculture, as recurring periods of water stress during the dry season make it increasingly difficult for farmers and communities to access sufficient water, leading to reduced crop yields. This has led to growing competition over water between agricultural and industrial users in recent decades, forcing the government to navigate a difficult balance between supporting industrial development and protecting agricultural livelihoods. A notable example is the ongoing dispute in the Kendeng Mountains of Central Java, where farmers have clashed with cement factories and lime mining operations over access to water and environmental impacts.

In the absence of strong transboundary water governance, security risks emerge. In rural communities across Southeast Asia, livelihoods are commonly linked to stable water flows for fishing or agriculture. Issues relating to limited water access, decreased sediment flows, salt intrusion and declining fish stocks directly threaten the viability of these livelihoods. From this, increased competition over resources and migration are two follow-up events that may occur at a growing pace.

Continuing climate change exacerbation and poor water management places additional tolls on cities and capitals such as Manila, Jakarta, and Bangkok, which are already facing water access issues and sea-level rise, along with compounding sociopolitical tensions. With these far-reaching consequences, the effects of climate and water insecurity threaten human security and stability.

Inclusive Water Governance

Tackling water insecurity in the region demands an inclusive approach that actively involves those most impacted by changing water conditions. At the 15th Regional Stakeholder Forum for Mekong in April 2025, the MRC conveyed that it is taking steps in this direction by providing greater opportunities for farmers, fishers, community representatives, and local leaders to contribute their insights. This vision needs to be realised sooner than later.

The recent public demonstrations over graft-ridden, substandard, or nonexistent flood control projects in the Philippines have also highlighted the absence of community consultations, especially for those living along riverbanks. Ignoring the consultation process causes direct harm to communities, as seen in this year's deadly floods in the Philippines.

Inclusive participation is crucial to formulating effective solutions to climate-related water challenges and preventing unintended consequences on peace and security. This allows for the effective incorporation of socioeconomic fragilities within water governance, ultimately protecting livelihoods and human well-being.

Role of the Security Sector

Viewing the water insecurity-climate change nexus solely as a technical or environmental matter overlooks its implications for peace and security. Water is inherently a political and security issue that demands a fundamental shift in how it is understood and managed. A wide range of stakeholders, agencies, and institutions, particularly the security sector, will need to take on vital roles in addressing these complexities.

As the impacts of climate change on water intensify over the coming decades, security actors can, and likely will, play a role, despite the risks often associated with their involvement. Securitising the water-climate-peace nexus, however, should not mean a militarised approach.

The military, police and relevant law enforcement bodies, and other security actors, should be equipped to analyse water-related risks, identify potential conflict pathways, and understand how these challenges affect local communities. The sector's capabilities can be tapped for infrastructure maintenance, conflict prevention, disaster response, and resource management to safeguard water access and ensure water availability for communities.

The security sector's role in conflict prevention measures can include proactive resource distribution plans, especially during severe floods or droughts, and supporting mechanisms for dispute settlement among local communities, where resource competition might expand. These contributions by the security sector should be systematically integrated into broader national strategies for water and climate security.

Conclusion

Amid intensifying insecurities driven by human activity and climate change, there is a pressing need to strengthen water and climate security frameworks – not only for the Mekong subregion but for Southeast Asia as a whole. A more integrated security governance approach, emphasising prevention and mitigation, will be crucial in building resilient communities and safeguarding shared water resources.

Biosecurity and the SDGs: Bridging a Crucial Gap in the 2025 Agenda

Jeselyn

With just five years remaining until the 2030 deadline, the global community is gearing up for the 2025 comprehensive review of the United Nations Sustainable Development Goals (SDGs). Comprising 17 goals and 169 targets, the SDG agenda aims to end poverty and other deprivation through strategies that improve health and education, reduce inequality, and spur economic growth while simultaneously addressing climate change and protecting the planet's ecosystems. Amid those broad ambitions, one critical yet under-recognised issue stands out: **biosecurity**.

Despite its profound relevance to global health, scientific development, and peace and security, biosecurity is not explicitly mentioned in any of the SDG goals and targets. Yet its core principles and practical imperatives are implicitly woven throughout the SDG frameworks, highlighting the need for more deliberate integration in the years ahead. Recent experiences with pandemics, laboratory incidents, and rapid advances in synthetic biology and AI-driven biotechnology underscore how biological risks can destabilise economies, disrupt education, and undermine sustainable development. Recognising and embedding biosecurity within the SDGs is therefore vital to safeguarding both human security and long-term global progress.

Biosecurity in the Shadows of the SDGs

The term “biosecurity” refers to measures and protocols taken to protect, control, and manage biological materials, technologies, and its relevant knowledge responsibly. Its main objective is to prevent the unauthorised access, misuse, loss, or weaponisation of hazardous biological materials. The COVID-19 pandemic exposed the catastrophic potential of biological threats and renewed calls to strengthen global and regional biosafety and biosecurity systems. However, despite its pressing relevance, biosecurity continues to be largely overlooked in global development discourse.

Biosecurity could be seamlessly incorporated into the SDG agenda, as it is relevant to many existing

commitments. Three of the entry points are SDG 3 on Good Health and Well-being, SDG 9 on Infrastructure, Industrialisation, and Innovation, and SDG 16 on Peace, Justice, and Strong Institutions. These correspond to key global biosecurity concerns: pandemic preparedness, biotechnological advancements including gain-of-function (GoF) research and dual-use research of concern (DURC), and the threat of bioterrorism.

SDG 3.D calls for strengthening countries' capacity to manage health risks, which aligns directly with the aims of biosecurity particularly in terms of pandemic preparedness, laboratory safety, and disease surveillance. Yet, despite this natural convergence, the SDG framework makes no explicit reference to biosecurity, leaving a critical gap in how global health resilience is conceptualised and measured. The absence of clear indicators for monitoring laboratory practices, pathogen handling, or the governance of high-risk research creates ambiguity about what “capacity” truly entails.

SDG 9 and SDG 16 also intersect with core biosecurity concerns. While SDG 9 promotes scientific innovation and infrastructure, it fails to consider the dual-use risks of emerging biotechnologies, such as synthetic biology, gene editing, and other AI-enabled biotechnology which can be misused for malicious purposes. Target 9.5 which specifically encourages scientific research and technological capacity-building, likewise lacks provisions for systematic biosecurity oversight or risk-assessment mechanisms.

Similarly, SDG 16, which addresses terrorism and violence, omits bioterrorism despite its rising threat due to the broader availability of AI-enabled biological tools and knowledge. Strengthening national capacities through comprehensive biosecurity legislation, fostering inter-agency collaboration between security and health sectors, and establishing a list of controlled high-risk biological agents under SDG 16.B, aligned with international agreements such as the Biological Weapons Convention (BWC), would help close a critical gap in global security and development policy.

A Southeast Asian Turning Point

In 2025, ASEAN member states issued the ASEAN Leaders' Declaration on Strengthening Regional Biosafety and Biosecurity, a landmark political commitment to bolster regional capacity, harmonise standards, and promote peaceful biological innovation. This declaration signals growing recognition that biosecurity is a development issue as much as it is a security issue—touching on health, education, research, and international cooperation.



The 1st Consultative Meeting on the Development of ASEAN Leaders' Declaration on Strengthening Regional Biosafety and Biosecurity

Photo credit: Department of Medical Sciences, Ministry of Public Health Thailand

This regional momentum presents a strategic opportunity for Southeast Asia to become a thought leader, integrating biosecurity considerations into its implementation and reporting of the SDGs. By aligning national development plans with biosecurity-enhanced targets such as laboratory accreditation, biosecurity training, and disease monitoring, ASEAN states can set a precedent for other regions to follow.

Moreover, embedding biosecurity into regional development planning can stimulate cross-sector partnerships between government, academia, and private industry, creating a culture of responsible science and innovation. Investments in workforce training, disease-detection infrastructure, and transparent data-sharing will not only strengthen pandemic preparedness but also support sustainable biosecurity governance and bolster public trust. By leveraging its collective expertise and the shared lessons of recent global health crises, ASEAN can showcase how proactive governance and regional solidarity transform biosecurity from a reactive defense into a driver of inclusive development and resilience.

Looking Ahead: Integrating Biosecurity into the SDG Agenda

In the newly released “ASEAN 2045: Our Shared Future” document, issued under Malaysia’s chairmanship, ASEAN has identified biosafety and biosecurity as critical components of efforts to strengthen regional health systems. The document also calls for the strengthening of regional mechanisms, including Biological and Radiological Defence Experts, to bolster preparedness. Hence, the 2025 SDG review presents a timely opportunity to mainstream biosecurity into regional and global development policy.

To guide this effort, three priorities should be emphasised. First, biosecurity should be explicitly recognised under SDG 3.D and SDG 16.B, with updated indicators that reflect laboratory capacity, implementation of the BWC, and oversight of dual-use research. Such indicators could include metrics on laboratory accreditation, incident reporting, and national regulatory frameworks, concrete benchmarks that encourage continuous improvement.

Second, biosecurity must be embedded within innovation governance frameworks under SDG 9, to ensure that biotechnological development proceeds in ways that are safe, ethical, and peaceful. Rapid advances in synthetic biology, genome editing, and AI-driven biotechnology or bio-design tools demand oversight mechanisms that protect against misuse while still enabling innovation and economic growth.

Third, regional leadership should be promoted and supported to address biological risks through coordinated action and greater investment in institutional capacity. Dedicated funding for training, surveillance networks, and emergency response teams can foster collective resilience and help ASEAN become a model for other regions.

As the world grapples with increasingly complex biological challenges, embedding biosecurity into the SDGs is no longer optional. It is essential.

Strengthening Transparency at the AI-Biotech Nexus

Julius Cesar Trajano, Jeselyn, and Mely Caballero-Anthony

In June 2025, OpenAI, the developer of Chat GPT, warned that future AI models are likely to reach “High” capability levels in biology under its “Preparedness Framework”. This means that individuals with basic training might obtain AI tools capable of creating biological or chemical threats. It also warned that these AI models raise an important dual-use consideration: enabling scientific advancement while safeguarding against harmful misuse.

In an era of unprecedented technological convergence, AI is accelerating breakthroughs in biological research, offering hope against diseases, optimising bio-manufacturing, and enabling early detection of pandemics. However, with this potential comes a serious dual-use dilemma: the same research outputs that generate lifesaving innovations can also be misused to develop biological weapons.

Transparency Under Threat

Large-language models (LLMs) have achieved transformational growth in dual-use capabilities, including supporting the design and implementation of biological and chemical research and testing protocols. LLMs have the potential to be utilised in accessing biological AI models to perform complex scientific tasks. This means that in the near future, AI will likely reduce the cost of biological innovations and help less experienced researchers utilise increasingly complex and powerful biological tools.

The same underlying capabilities that drive progress, such as analysing biological data, predicting chemical reactions, or guiding laboratory experiments, could also be misused to enable people with minimal expertise to recreate biological threats or assist highly skilled actors in developing bioweapons.

Recent evaluations by OpenAI and others indicate that frontier AI systems may soon enable novice actors to replicate known biothreats. The growing “novice uplift” risk highlights a critical gap in current biosecurity

governance – a lack of transparency in how AI tools intersect with sensitive biological knowledge and capabilities. This lack of national regulatory oversight undermines trust and transparency, particularly as private AI labs, startups, or universities conduct powerful research outside government oversight.

Without transparency, the bio-AI field becomes opaque, trust declines, and regulatory blind spots expand. A key concern is the lack of clear responsibility and accountability for AI companies regarding the dual-use potential of their technologies, especially in the context of biological research. The question arises: What share of responsibility should AI developers bear relative to the scientists using AI models in their research?

How AI Can Help Boost Transparency in Biological Research

Although AI presents certain risks, it also offers significant opportunities to strengthen biological arms control and reduce biological threats. Since the Biological Weapons Convention (BWC) lacks a formal verification mechanism, AI and other emerging capabilities could help develop innovative measures to ensure compliance by state and non-state actors.

AI’s ability to analyse large volumes of data to identify trends could significantly enhance disease surveillance, enable early warning systems, and accelerate response efforts. When harnessed effectively, these capabilities could improve cross-border assistance in cases of BWC violations and help to reduce the impact of any use of biological weapons.

AI tools can be utilised in several ways to identify and react to biological threats:

- AI applications could include the mapping and analysing of terrorist networks, patterns, social media, and travel to predict and disrupt biologically related activities and attacks.
- AI-enabled capabilities could be utilised to analyse data, images, and overhead satellite imagery to help differentiate between legitimate biological research and suspicious, weapons-related activities.
- AI can be used to identify and disrupt illicit procurement networks that attempt to bypass export control measures and acquire dual-use biological materials.
- AI applications can support attribution efforts by identifying unique signatures of biological samples or incidents, helping to trace their origins or the responsible parties.



AI in the life sciences can revolutionise innovation across diverse scientific applications.

Photo credit: istockphoto, under Creative Commons

AI could, therefore, enable more effective and targeted policy responses and could deter the development or usage of biological weapons.

ASEAN's Role in Enhancing AI Transparency for Biological Arms Control

Without a verification mechanism under the BWC, regional transparency measures are vital for building trust and ensuring compliance. As AI becomes more integrated into biotechnology and disease surveillance, there is a growing need for mechanisms that ensure the transparent and responsible use of AI, especially in its dual-use applications. There are cogent reasons why ASEAN, as a regional organisation with a long-standing focus on confidence-building, dialogue, and non-traditional security cooperation, is well-positioned to support efforts that promote AI transparency in the biological domain.

Firstly, ASEAN's institutional platforms, such as the soon-to-be-established ASEAN Biosafety and Biosecurity Network (ABBN) and the ASEAN Health Cluster 2 on "Responding to All Hazards and Emerging Threats", can serve as platforms for dialogue on responsible AI development and application in biotechnology. These platforms have already facilitated discussions on other emerging technologies and regional security concerns. They can be expanded to include structured dialogues on AI-related risks, norms, and transparency practices, particularly in relation to biological threat mitigation.

Secondly, ASEAN member states could consider establishing a regional voluntary reporting mechanism or transparency initiative focused on the AI-biotech nexus. While formal verification under the BWC remains out of reach, such voluntary measures, including the sharing of national AI-biosecurity policies, oversight frameworks, and ethical guidelines, can foster regional confidence and demonstrate collective commitment to non-proliferation and responsible innovation. These transparency efforts could be integrated into the future ABBN, which is currently under development.

Thirdly, ASEAN can promote the standardisation of AI governance principles related to biological security, such as accountability, auditability, and traceability. Given that AI systems used in biosurveillance and data analysis may involve opaque or proprietary algorithms, a regional framework that encourages transparency about the sources, methods, and limitations of AI tools can help reduce misperceptions and build mutual trust, especially in sensitive areas such as attribution or threat detection.

Fourthly, ASEAN's emphasis on capacity-building and narrowing of development gaps across member states can be directed toward enhancing AI literacy, technical skills, and regulatory coherence. This includes supporting national governments in establishing safeguards against AI misuse in biological research and enabling them to participate meaningfully in regional transparency initiatives. Tailored technical assistance, knowledge-sharing platforms, and public-private dialogues on AI in biosciences could contribute to a more balanced and inclusive regional approach to transparency.

Fifthly, ASEAN can advocate for greater involvement of scientists, ethicists, and civil society in regional AI-biosecurity governance, fostering a multi-stakeholder model that enhances transparency and legitimacy. Science diplomacy, long promoted within ASEAN, can be expanded to encompass the AI-biotech frontier, encouraging cooperative research and peer exchanges that promote openness and collaboration in the biological sciences.

Conclusion

By emphasising transparency over verification, ASEAN can carve out a pragmatic and constructive role in supporting the BWC's objectives in the age of AI. In doing so, ASEAN helps to bridge the gap between developed and developing countries, between innovation and regulation, and between security and scientific openness – ensuring that AI is not only protected against misuse but actively harnessed to strengthen the global biological security regime.

ASEAN Must Strengthen Regional Cooperation to Close the Gap on SDGs

*Mely Caballero-Anthony and
Danielle Lynn Goh*

2025 was a pivotal year for the global community. Last year was mid-point for the achievement of the Sustainable Development Goals (SDGs) by 2030. As the world takes stock of the milestones and gaps in meeting the SDGs, challenges such as climate change, COVID-19 pandemic, the wars in Ukraine and Gaza and heightened US-China rivalry have seriously impacted progress—and even resulted in reversal of gains achieved since the SDGs were adopted in 2015.

According to the Sustainable Development Report 2024, there has been some progress in ASEAN in several areas, but challenges remain in eradicating poverty. Broadly, with the region being vulnerable to disasters, ASEAN along with other countries in the Asia-Pacific must build their resilience, protecting people's lives and livelihoods, and reduce economic losses of those devastated by disasters. As a whole, in the wider Asia-Pacific, only 11 per cent of the measurable targets are on track. On achieving zero hunger, ASEAN countries fared worse,

with undernourishment and food security needing to be more urgently addressed. In the area of health security, there have been positive improvements particularly for maternal and child mortality.

However, globally, while majority of the health indicators are moving in the right direction, none of the other health-related indicators have been achieved, and they are unlikely to be reached by 2030. Of great concern are the SDGs on climate action, life below water and life on land. The Asia and the Pacific SDG Progress Report 2024 highlighted that there has been a regression in Southeast Asia and the Asia-Pacific as regards to climate action.

Meeting the SDGs is critical to ASEAN. At the ASEAN Workshop on Sustainable Development 2025, ASEAN Secretary-General Dr Kao Kim Hourn reaffirmed ASEAN's commitment to sustainable development, and emphasised the importance of sustainable financing.



The 17 Sustainable Developmental Goals (SDGs).

Photo Credit: Wikimedia Commons

ASEAN 2025 Agenda and SDGs

With geopolitical fault lines and US-China rivalry deepening, the ongoing Myanmar crisis, and disputes in the South China Sea, ASEAN continues to face challenges to its unity and centrality. Plans to develop an ASEAN-wide digital payment system, and a power grid will allow for regional integration, vital to the security of the region. ASEAN has also urged the Myanmar government to prioritise ending the civil war, and to adhere to the five-point consensus.

Confronted with geopolitical tensions, and bloc politics by major powers, ASEAN's integration is key to regional security and allows for cooperation and sustainable development. ASEAN has put in place regional initiatives to tackle food insecurity, during times of crisis. For example, the ASEAN Plus Three Emergency Rice Reserve (APTERR), which includes cooperation among ASEAN member states, China, Japan and South Korea, has been utilised actively, with countries contributing rice to countries that require help. However, the region faces multiple challenges, as ASEAN's food production levels are unable to meet increased demand, resulting in a need to import from outside the region.

In addition, climate change impacts in Southeast Asia such as changing weather patterns and extreme weather events have further aggravated food insecurity. Regional supply chains can be strengthened, as only 20 – 30 per cent of ASEAN trade in food and agricultural products are from intra-regional trade.

The COVID-19 pandemic underscored the need to develop regional capacities and collaboration in preparation for future pandemics. ASEAN has taken further steps to build these capacities. In 2022, the ASEAN Centre for Public Health Emergencies and Emerging Diseases (ACPHEED) was established, and the One Health Network and Joint Plan of Action was launched in June 2024. However, there remain disparities as regards to achieving Universal Health Coverage (UHC). While most ASEAN member countries have progressed slightly in 2021, as compared to 2015, Myanmar had a decreased score, and Vietnam remained the same.

At a regional level, ASEAN is gradually developing a power grid that can help facilitate a regional market for power trading, distributing renewable energy more efficiently. This cooperation can be effective and instrumental to lessen the region's dependence on fossil fuels and coal.

As of 2024, coal generated about half of the region's electricity. Within Southeast Asia's energy mix, coal has risen from 9 per cent in 2000 to 28 per cent in 2023. It remains to be seen the impact of the ASEAN power grid on the energy transition, and if this would result in a shift away from fossil fuels. Ahead of the 2030 milestone, integrating climate, peace and security in the ASEAN agenda would allow for the region to identify potential at-risk areas, and signal the urgency to prioritise climate security and action in national and regional policies.

Can ASEAN lead the way?

In a fractured world, with the intensification of rival blocs, ASEAN's relevance will continue to be tested. ASEAN member states need to continue to engage and work with all countries, and maintain an inclusive approach to development and peace in spite of worsening geopolitical rivalry between major powers.

The continued commitment for ASEAN to prioritise its unity and centrality during the 46th ASEAN Summit on 27 May 2025 was a welcome one and paramount for regional security. ASEAN leadership on the global stage, will hinge on its solidarity, and its ability to demonstrate its effectiveness as a regional bloc in addressing the challenges it faces in sustainable development and advancing its values of comprehensive and cooperative security. More can certainly be done to strengthen intra-regional cooperation to better address the gaps in achieving the SDGs in ASEAN.

Artificial Intelligence and Energy Transition in Southeast Asia

Margareth Sembiring and Danielle Lynn Goh

Southeast Asia is set to expand the use of renewable energy sources, including solar, wind and hydropower. Such development is a key prerequisite for low-carbon energy transitions.

In anticipation of the region's growing energy demands – by 60 per cent between 2019 and 2040 – ASEAN member states have been ramping up their energy production. They have set an aspirational target for renewable energy sources to make up 23 per cent in the regional energy mix by 2025.

Local Opposition to Renewable Energy Projects

At the same time, renewable energy infrastructure development has impacted local communities, often resulting in the degradation of land and water quality

and the displacement and loss of livelihoods. The weakness of local communities vis-à-vis the state and corporations, the absence of strong participatory mechanisms and fairness in compensation, and the lack of transparency in decision-making processes have already led to widespread opposition toward renewable energy projects from these local communities.

In Malaysia, opposition to the Bakun hydroelectric dam project in central Sarawak persisted for years before it was eventually commissioned in the 2010s. In Indonesia, residents of Poco Leok in East Nusa Tenggara Province and of Padarincang, Serang, in Banten Province, have mounted opposition to proposed geothermal power projects. In Thailand, a string of protests and legal challenges has been launched against various hydro dam projects in places such as Pak Beng, Nam Choan, and Xayaburi. The Yuam/Salween water diversion project has similarly been affected.

Digitalisation, Artificial Intelligence, and Social Mobilisation

Within the context of social mobilisation in the region, digital technologies such as social media and messaging platforms played an important role in influencing opinions, garnering support, and mobilising action. At the same time, these technologies have been used to spread disinformation, hate speech, and to cause polarisation.



Hydropower projects in Southeast Asia are central to the region's energy transition efforts.

Photo credit: freepik.com

Added to them are various means of control through the use of surveillance and restrictive legal measures.

It is within this digital environment that Artificial Intelligence technology has been introduced. Given its rapidly expanding use, understanding its impacts on social mobilisation, particularly in relation to renewable energy expansion and energy transitions, is beneficial.

The use of the new technology can empower activism by increasing transparency through AI-powered real-time monitoring. An example of this is the use of AI-powered data collected by the World Resources Institute's Global Forest Watch by Forest Watch Indonesia – a civil society organisation working with the Aru indigenous people living in the Moluccas – to track the locations of illegal logging. This monitoring allows communities to follow timber movements to ports, record critical evidence and report the findings to the authorities. This has resulted in the confiscation of 38 containers of illegal timber in 2019 by the Ministry of Environment and Forestry.

Discussions on AI's role in the specific context of social mobilisation are still limited in Southeast Asia. However, given that such conversations have begun elsewhere, such as in the United States, it is important to pay close attention to them, considering the contested landscape of energy transition in the region.

Preliminary debates suggest that AI tools have the potential to help activists monitor state responses before, during, and after public protests, which is helpful for their logistical planning and real-time tracking of the movements of their friends and foes. In addition, through its capability to aggregate and analyse vast amounts of information and to disseminate it in structured and accessible ways, the AI technology may also enhance communication and cooperation among activists, helping them overcome leadership and organisational issues that often weaken social mobilisation.

On the other hand, the same technology has been used by their adversaries to enhance surveillance mechanisms aimed at suppressing activism among the people, including those living abroad, through censorship. In addition, AI-powered bots and trolls have been deployed to intimidate activists, instil fear and discourage them from expressing their opinions. At the same time, AI-generated fake content and propaganda have been used to discredit them.

Governance Reforms Towards Just and Inclusive Energy Transition

In view of the uncertain implications of AI application in social mobilisation, there is an urgent need for guidelines

on its use by state actors, activists and those engaging in social mobilisation. Importantly, it is essential to address governance problems that underpin the local communities' grievances.

The recent global turn toward just and inclusive energy transition principles, which explicitly recognise the need to protect those adversely affected by the low-carbon transition agenda, provides an entry point for countries in the region to address long-standing governance challenges and community opposition linked to renewable energy development.

At the regional level, ASEAN has begun to move in this direction. In 2024, the regional grouping endorsed the ASEAN Plan of Action for Energy Cooperation from 2026 to 2030 with a thematic focus on energy security and decarbonisation for a just and inclusive energy transition. More recently, in January 2025, the ASEAN Centre for Energy partnered with Oxfam in publishing A Guide to a Just and Inclusive Energy Transition in ASEAN.

With the growing use of AI, ASEAN countries must also track and examine its impact on the energy transition, and ensure the transparency of AI use, data security and adherence to ethical standards that safeguard the rights and participation of local communities. In addition, states must be held accountable to prevent repression and violence against communities protesting the energy transition. This is particularly critical in light of the region's push for cross-border electricity trade under the ASEAN Power Grid initiative, which hinges on renewable energy expansion.

Conclusion

To provide for a just and inclusive energy transition, it is necessary for states to reform their energy transition governance through the strengthening of inclusive and participatory processes. ASEAN member states and corporations constructing renewable energy infrastructure must assess the impacts of low-carbon energy development and prioritise meaningful consultative processes with affected communities. States would also need to uphold their rights and actively engage with civil society groups.

Cooperation among ASEAN member states is integral to the development of the just and inclusive energy transition frameworks and guidelines regionally. While ASEAN has published a guide on AI governance and ethics, the regional grouping must also establish and coordinate AI governance standards in relation to energy transition, ensuring that the new technology reinforces, rather than undermines, justice and inclusivity.

Impacts of Tariff War on ASEAN Food Security

Jose Ma. Luis Montesclaros and Kayven Tan

One of the key events of 2025 was the tariff war, which locked the United States and China into a cycle of escalating tariffs. While the tariff wars have been discussed mostly focusing on their direct effects on jobs and exports, what is less discussed is that the tariff wars may also have indirect impacts on the food security of countries. This article explores this angle from the viewpoint of Southeast Asia. It argues that beyond the direct effects of the ongoing trade war, a key risk to the ASEAN economies lies in the collateral impact on food supplies and prices, especially if China and other “tariffed” countries react and seek alternative sources of food.

From Tariff Wars to Food Security Impacts

The causal pathway for how the tariff wars translates to food security impacts are described in the figure below.

- In response to increases in tariff rates imposed by the US on China’s exports in the earlier rounds of the tariff war (box 1), China hit back with additional tariffs on US\$21 billion worth of US agricultural products in March 2025 (box 2). Beijing’s retaliatory tariffs meant an additional 10 per cent tariff on soybeans, sorghum, beef, pork, aquatic and dairy products, fruits, and vegetables, and an additional 15 per cent tariff on wheat, corn, maize, and chicken from the US.
- China’s counter-tariffs on the US could trigger a reconfiguration in global food supply chains, since the China’s counter-tariffs will likely turn away some

US exporters (box 3). In turn, China will turn to alternative countries to meet its own food security requirements (box 4).

- The food security concern for ASEAN states is on how the tariff war could impact the supply and prices of food in the region. In particular, it will depend on whether China, in turning away from the US, might turn to food exporters which presently supply to ASEAN countries (box 5). In such cases, the impact would be an increase in import competition, translating to either reduced ASEAN imports, higher import prices, or both (box 6).

Today, 37 per cent, or 251 million people in Southeast Asia, are unable to afford a healthy diet, based on statistics from the United Nations Food and Agriculture Organisation. Many ASEAN states rely heavily on imports for their food. Wheat is used in household staples such as noodles and bread, while corn and soybeans are used for food and livestock feed.

As the risks to ASEAN countries depend on where China will get its food to compensate for the shortfalls arising from the trade war, further analysis was conducted in an August 2025 policy report by the authors. The analysis revealed that Brazil, Russia, South Africa, Argentina, Canada, Australia, and New Zealand will feature significantly among China’s alternative sources for the six key commodities studied (soybeans, wheat, maize, chicken, pork and beef). The analysis also showed that ASEAN’s greatest vulnerabilities lie in soybeans, wheat, and maize, relative to the meat products. The analysis was conducted using the Tariff Simulator developed by Viktor Stojkoski, Pablo Paladino, Jelmy Hermosilla, and César A. Hidalgo at MIT’s Observatory of Economic Complexity (OEC).

Further Price Risks and Uncertainties

There are other risks not yet included in the previous simulations, but which may yet materialise in the year to come. Firstly, there may be a fallout in tariff negotiations, leading China to return to its tariff war rates of more than 100 per cent. Other countries could similarly impose their tariffs on the US, thus implying further costly renegotiations down the road. Analysis using the tariff simulator, revealed that a tariff upwards of 100 per cent, could lead to close to 22.99 million tonnes of China soybean imports being diverted away from the United States.

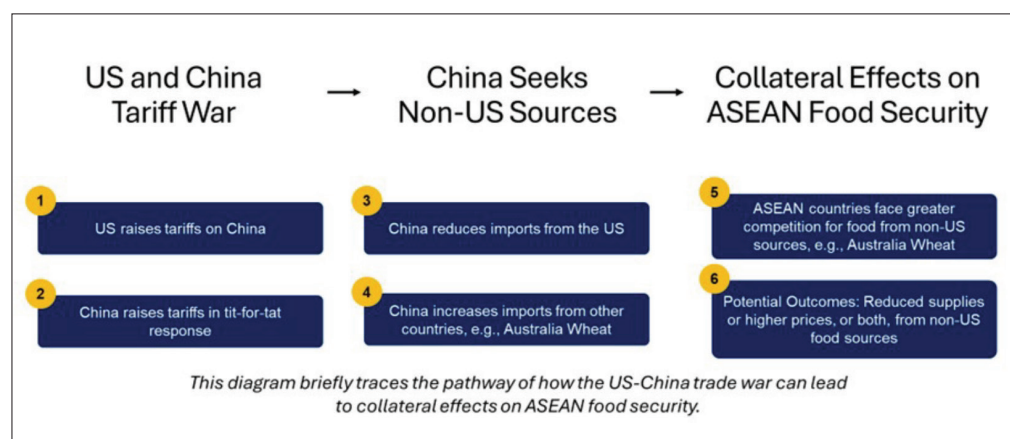




Image generated by authors using ChatGPT and Microsoft Copilot, AI models, with final edits using MS Powerpoint, 18 August 2025.

Secondly, restrictions beyond tariffs, may be applied. A key example is in soybeans, for which the United States used to be a key source of China. Even as China agreed a tariff truce with the United States in May 2025, which was further extended from August 2025, China has continued its strategic import diversification away from the United States for some of its key commodity imports.

China has continued reducing its imports from the US, such that even in early October 2025, China did not make any purchases of soybeans from the US' autumn harvest (usually in September to November, depending on the location). Instead, China sourced more than 85 per cent of its soybean imports from Brazil, based on the August 2025 records. Thus, the shifts in food supply chains go beyond tariffs. China had also previously suspended import licenses for key US soybean exporting companies.

There are two further risks which are still unfolding, but which still cannot be discounted, are the possibility of an upward price spiral owing to speculation among traders, as in the 2007/8 global food price crisis, and risk that the US tariffs could further trigger inflation and economic crises in ASEAN, thus aggravating food affordability issues.

Regional Imperatives

To cope with the increased competition from China arising from the trade war, one imperative is for affected ASEAN countries to seek import diversification, such

as redirecting their imports to US companies, which usually export to China, or find other sources.

Amid the uncertainties and reconfigurations in imports, the region can therefore expect an increase in food prices. Beyond bilateral trade facilitation, ASEAN countries may explore regional bulk purchases to increase their negotiating power with sellers. Equally critical will be their ability to build contingency plans to support the poor households.

Today, the US government is also making its own moves to secure the jobs and economic security of its own farmers, by supporting its traders in reaching out to Southeast Asia as alternative importers. As part of tariff negotiations, for instance, the US has obtained a commitment from Indonesia to increase its imports grain imports from the US, and to purchase approximately one million tonnes of wheat per year in 2026-2030. The risk to Indonesia, however, is that these may also come at higher prices to import from the US, and heftier shipping costs owing to distance.

If the impending crisis is to be weathered, ASEAN countries must look into adapting or transforming their food supply chains by adopting agricultural technology, expanding intra-regional trade, and developing stockpiles beyond rice. The crisis may yet serve as a push for greater "collective self-resilience", whereby ASEAN countries, individually or in concert, seek to address the structural problems faced by agriculture by providing more support to their dwindling farmers, who are also ageing.

Nuclear Power and Sustainable Development in Southeast Asia

Julius Cesar Trajano

Growing energy needs, the escalating climate crisis, and the global sustainable development agenda have fuelled renewed interest in and adoption of nuclear energy. Southeast Asia is a region where nuclear power is now being seriously considered by various countries as their main clean energy source. A pivotal moment came in 2015 with the adoption of the Paris Agreement and the Sustainable Development Goals (SDGs), which accelerated shifts across the global economy—particularly in the energy sector.

How nuclear power supports SDG 7

Nuclear power is proven to be a reliable, zero-carbon energy source many countries are now considering or

adopting as part of their energy mix, and as part of their efforts to meet the United Nations Sustainable Development Goal (SDG) 7. It focuses on “Affordable and Clean Energy,” which nuclear power helps attain to and crucial for decarbonisation and energy security. In Southeast Asia, several countries particularly the Philippines, Vietnam and Indonesia are now involved in preparatory steps to build their first operable nuclear power plants. The evolving energy landscape has powered growing interest in the Asia-Pacific in next-generation nuclear technologies, including small modular reactors (SMRs), micro modular reactors (MMRs), and floating nuclear power plants (FNPPs). Advocates highlight their potential uses across diverse sectors such as heavy industry, maritime transport, data centers, and remote communities.

In reality, Southeast Asia’s initial venture into commercial nuclear power is more likely to emerge from a large conventional reactor rather than an untested technology. The Philippines is exploring the possible revival of the long-suspended Westinghouse plant in Bataan, while Vietnam has renewed its collaboration with Rosatom to develop new pressurized water reactors, aiming for an ambitious completion goal of 2030.

Indonesia is also aiming to introduce commercial nuclear power by the late 2030s to address its rapidly growing electricity demand. The country is engaging



The Philippines’ Bataan Nuclear Power Plant

Photo credit: Julius Cesar Trajano/NTS Centre

a wide range of suppliers, from established reactor vendors to developers of floating nuclear power plants (FNPPs). However, the trajectory of its program will largely depend on whether it opts to pursue technology indigenization through joint ventures with foreign partners.

Key Capacity Building and Public Acceptance Issues

To be able to make nuclear energy in Southeast Asia a sustainable energy source in the future, whether countries will choose to build conventional NPPs or procure SMRs, social acceptance, nuclear education and capacity building need to be broadened at both regional and national levels.

Achieving public trust is critical especially in each of the countries preparing for nuclear power. A long-term commitment to nuclear power requires sustained social acceptance, which can evolve over time. Governments must engage all stakeholders to build strong buy-in, foster public trust, and address related societal concerns. Building public trust in nuclear energy requires early investment in education and awareness campaigns, coupled with meaningful opportunities for public participation in decision-making. At the same time, it is essential to systematically respond to public concerns, particularly around the risks involved, to ensure confidence and credibility in the development of nuclear energy.

Workforce training remains a major priority for countries preparing to launch local nuclear power programs. National nuclear energy institutions are recalibrating their capacity building strategies to expand their pool of local nuclear professionals as well as raise their ability to assess emerging nuclear reactor technologies, including SMRs.

For example, in July 2025, the Singapore Nuclear Research and Safety Institute (SNRSI) was launched with an expanded research scope, additional funding and an aim to train 100 nuclear experts by 2030, mainly to help Singapore better assess the suitability of deploying nuclear reactors. Indonesia's National Research and Innovation Agency (BRIN) is working to strengthen human resource capacity in nuclear technology to meet future national workforce requirements. This includes the goal of training 4,900 nuclear specialists by 2040 to support the operation of nuclear power plants.

Regional and Global Partnerships

In this regard, continued assistance and support from the International Atomic Energy Agency (IAEA), the

ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM), and dialogue partners particularly in the area of capacity building, advanced training, technical guidance, and shared best practices will further enhance national capabilities in ensuring that nuclear energy applications in the region will be safe and secure while contributing to realising SDG 7.

Ensuring the safe and secure deployment of nuclear energy, including SMRs, requires a comprehensive adoption of the 3S approach—safety, security, and safeguards—by all relevant stakeholders, ranging from governments and regulators to nuclear vendors and power utilities. Reassessing existing global nuclear conventions and IAEA safety standards and security guidance is imperative to determine the sufficiency of coverage for SMRs. Several studies have indicated that the principles of existing conventions can be applicable to SMRs without necessitating amendments or new conventions.

However, considering the unique specifications of SMRs, specific international standards and guidelines that are not inherently tied to a particular reactor technology are needed. Southeast Asia, with its coastal archipelagic geography, anticipates a significant potential for floating reactors to operate in the region in the coming decades.

Recognising the dynamic nature of floating reactors transiting through the Southeast Asian region, a paradigm shift is being called for. The mobility of nuclear power stations is no longer a localised issue, necessitating a proactive approach by Southeast Asian countries—particularly those expressing interest in the potential use of SMRs in the future. It is crucial for these countries to play an active role in reviewing and, if necessary, reshaping civilian nuclear governance to accommodate and address the specific challenges posed by deploying new types of reactors in the region.

Looking forward, nuclear energy development in the Asia-Pacific is set on an upward path. While challenges persist in governance, regulatory capacity, and workforce development, the region is increasingly supported by a strengthening web of international and regional cooperation.

Signals, Not Siloes: A WPS Approach to Addressing Forced Migration in ASEAN

Danielle Lynn Goh and Tamara Nair

Across Southeast Asia, women's precarity is shaped by compounding pressures along migration routes, in conflict-affected areas, and amid intensifying climate shocks. Women and girls continue to constitute the majority of identified trafficking victims globally, and according to a UNODC report in 2022, in ASEAN they face overlapping risks of sexual exploitation, forced labour (including in cyber-scams), domestic servitude, and forced marriage. This is not accidental: gendered labour segmentation, unpaid care burdens, and unequal access to citizenship and documentation make women more likely to accept risky migration or informal work, and more likely to be targeted by intermediaries posing as recruiters. Climate hazards magnify these vulnerabilities by disrupting livelihoods, uprooting families, and straining basic services, conditions traffickers exploit because women's income-generation options narrow fastest in crises. These patterns—and the gendered exposure that underpins them—demand responses that join anti-trafficking, disaster risk reduction, migration governance, and the Women, Peace and Security (WPS) agenda are merged into one prevention frame.

ASEAN's WPS Regional Plan of Action, set in place in 2022, hopes to not only protect women from violence and prevent both structural and physical violence against them but to also increase women's participation in formulating and implementing strategies such as gendered early warning systems that can help signal forced movement. And of course, unless women are part of the relief and recovery strategies, post-crises, it would be difficult to properly plan for future upheavals. These elements of protection, prevention, participation and women's role in relief and recovery form the four pillars of the WPS agenda. They provide a crucial framework within which forced movement of women, in the immediate aftermath of crises, can be comprehensively addressed.

Such a gender lens is crucial because women in Southeast Asia often migrate not only for themselves but

for their dependants. When remittances are the main buffer against poverty, women tolerate poorer working conditions, debt-financed recruitment, or even document confiscation, believing these to be temporary trade-offs. Traffickers and complicit brokers often 'read' these pressures and time their offers to coincide with crises, after cyclones, after conflict-induced displacement, or after factory closures, when women's bargaining powers are at their lowest.

Conflict and Climate Change Linkages

Conflict dynamics often drive large-scale displacement. This has been the case in some states, heightening exposure to trafficking for women and girls who traverse informal crossings. These routes are poorly monitored, involve multiple intermediaries, and frequently intersect with criminal networks that also trade in drugs, weapons, and wildlife. Within these networks, women can be diverted away from their stated migration destination and moved instead into forced marriages in other places, entertainment venues in border towns, domestic work under conditions of confinement, and more recently, according to INTERPOL data, industrialised cyber-scams that extract profit through technology-enabled fraud. In these compounds, women may be doubly victimised: coerced to perpetrate scams online and punished physically or sexually when performance quotas are not met.

Technology has also enhanced these nefarious practices. Digital infrastructures help create new 'sites' of exploitation. Online recruitment, short videos, and messaging apps allow traffickers to mask the true nature of jobs and to reach women in rural areas who previously would have been out of their radius. Once on site, data indicates that women can be controlled through a combination of debt, surveillance, language barriers, and the threat of criminalisation if they try to escape.

Climate change interacts with these conflict risks. Disasters such as major floods, typhoons, and prolonged droughts in Vietnam, the Philippines, Myanmar, and parts of Thailand have increased rural impoverishment and temporary displacement. Following disasters, households often resort to short-term migration, taking up informal work in construction, domestic service, agriculture, or entertainment in urban centres and coastal economic zones. Where early-warning systems do not include gendered protection measures such as safe transport, information in minority languages, or child-care options, women end up moving irregularly, without documentation, and through brokers they do not know. In both conflict and climate emergencies, the absence of gender-responsive early-warning and referral systems



Climate change impacts in the agriculture sector pose significant challenges to women's livelihoods and food security.

Photo Credit: UNDP Climate/ Flickr.com via Creative Commons

enables traffickers to target women precisely when household resources and social protection are weakest.

There are a number of structural drivers that recur in the region. For one, women are overrepresented in domestic work, entertainment, garment, agriculture, and care sectors. These are sectors with weaker inspection regimes and high informality. This is something that can be exploited by criminals. Women from conflict areas, ethnic minorities, or climate-affected rural zones may lack citizenship documents, birth certificates, or travel papers. This increases their reliance on brokers and makes them more likely to accept debt-financed mobility, a classic entry point into trafficking. In some communities, returnees from entertainment work or from overseas are stigmatised, which in turn disincentivises reporting and cooperation with law enforcement. Traffickers count on this silence.

Regional and National Approaches

ASEAN has established a robust normative base: the ASEAN Convention Against Trafficking in Persons (ACTIP), Especially Women and Children and its Plan of Action commit member states to prevention, victim

protection, regional cooperation, and prosecution. These instruments matter because trafficking in Southeast Asia is rarely a single-country crime: recruitment, transit, exploitation, and money flows may span three or four jurisdictions. ACTIP creates a legal and political basis for joint investigations, mutual legal assistance, and safe return. In parallel, ASEAN's integration of the WPS agenda, culminating in the Regional Plan of Action on WPS, can create an institutional pathway to knit anti-trafficking work with gender-responsive peacebuilding, humanitarian response, and recovery. WPS gives the region a language of protection and participation that can be used to argue for women's seats at the table in migration policymaking and in disaster and conflict coordination platforms.

Yet progress remains uneven. Tier assessments under the U.S. Trafficking Victims Protection Act recognise improvements in some ASEAN member states while identifying persistent gaps in investigations, victim identification, and labour inspections. Some states still rely heavily on victim self-identification, which is unrealistic for women under coercion or debt bondage. Others lack trauma-informed shelters or do not extend services to foreign victims. And very few WPS National

Action Plans explicitly link trafficking risks to climate- or conflict-related displacement, even though these are increasingly common in the region. This siloed thinking can lead to irreparable harm for communities by not properly envisioning the interactions between climate change or conflict -induced movement of people, poverty and structural inequalities, and gender.

How Gendered Early-Warning Systems can help

A gendered early-warning system (GEWS) adapts classic risk monitoring, originally designed for armed conflict or disaster risk reduction, to the specific exposure, needs, and agency of women and girls. GEWS requires sex-, age-, and disability-disaggregated data. This would include data on displacement, school dropout numbers among girls, sudden increases in women joining 'overseas work' WhatsApp or Telegram groups, spikes in gender-based violence at displacement camps, complaints of debt bondage, or circulation of job ads that match known scam-centre profiles. According to the US State Department and ASEAN guidelines, such warning systems should ideally link alerts to pre-negotiated

pathways of safe transport, survivor- and child-friendly shelters, trauma-informed health services, legal aid, consular support, and safe-return protocols. For cyber-scam victims, this must include digital forensics and non-prosecution safeguards when victims were coerced into committing crimes.

GEWS should not be a purely state-to-state or police-to-police tool. Women's organisations, migrant associations, faith-based responders, and survivor leaders should co-design alert thresholds, messaging, and routing. This improves reach, including to those without connectivity, because these non-state actors can assist with identifying brokers who operate locally and which transport routes are risky. They also help reduce stigma and increase reporting, as female survivors are more likely to seek help from women-led intermediaries.

There are some practical entry points for ASEAN to embed GEWS within the WPS Regional Plan to combat the trafficking of women. For one, we can embed GEWS in disaster management. Adding specific triggers to national early-warning and disaster-management SOPs can help identify possible illegal activity around cross-



A woman farmer in Vietnam

Photo Credit: Trường Bản Review/ Pexels via Creative Commons

border movements and signal the need for deployment of security teams to verify signals and initiate victim-centred strategies to combat such activities. We can also expand safe migration channels to extend the reach of social protection, so crisis-hit women are not forced into irregular routes. Strengthening community-based women's networks would also be an important step. Women's groups are often first to detect disappearances, suspicious brokers, or spikes in violence against women.

For each of the four pillars of WPS, there needs to be political will and financial backing from states to realise the bigger goals of peacebuilding in the regional plan.

Conclusion

Women's precarity in Southeast Asia is not a single crisis but a convergence: armed conflict, climate shocks, tightening labour markets, and digitalised exploitation models interact to widen the space in which traffickers operate. ASEAN already has the normative scaffolding through ACTIP and the WPS Regional Plan of Action; the task now is operational fusion, bringing gendered early-warning into disaster, conflict, migration, and cybercrime responses so that risk signals convert into rapid, survivor-centred protection. Doing so will close the window traffickers use most: those short periods after crisis when women must move, information is scarce, and state systems are slow to respond.

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EVENTS

RSIS Seminar on “The Future of Energy Transition in Southeast Asia,” 19 November 2025, NTU, Singapore

RSIS Webinar on “25 years of Women, Peace and Security in the Indo-Pacific: Issues/Threats,” 30 October 2025, Online

RSIS Webinar on “25 Years of Women, Peace and Security in the Indo-Pacific,” 28 October 2025, Online

RSIS Roundtable on “Past as Prologue: Historical Lessons from ‘The Earth Transformed’ for Contemporary Climate and Planetary Health Security,” 21 October 2025, NTU, Singapore

RSIS Closed-Door Workshop on “Early Warning Systems in the ASEAN Women, Peace and Security Regional Plan of Action: Potential (and Pitfalls) in Preventing Gender-Based Violence,” 8 October 2025, NTU, Singapore

RSIS Workshop on “Revisiting Biological Weapons Convention's Confidence-Building Measures: ASEAN Perspectives,” 18-19 September 2025, Orchard Hotel, Singapore

RSIS-ISEAS-Yusof Ishak Institute Webinar on “Will the Tariff War Lead to Another Global Food Crisis?” 29 May 2025, Online

7th NTS-Asia Consortium Annual Conference, 8-9 May 2025, Grand Copthorne Waterfront Hotel, Singapore

Roundtable on Non-Traditional Security in a Changing Global Order, 7 April 2025, Holiday Inn Atrium, Singapore

Council for Security Cooperation in the Asia Pacific (CSCAP) Nuclear Energy Experts Group Meeting, 18-20 March 2025, Bangkok, Thailand

Council for Security Cooperation in the Asia Pacific (CSCAP) Study Group Meeting on Biosecurity and Health Security, 10-11 March 2025, Grand Copthorne Waterfront Hotel, Singapore

2025 EVENTS



RSIS Seminar on “The Future of Energy Transition in Southeast Asia,” 19 November 2025

Southeast Asia stands at a pivotal moment in its energy transition, confronting the dual challenge of ensuring energy security while advancing sustainable, low-carbon solutions. To address these pressing concerns, the NTS Centre hosted an RSIS Seminar that brought together a diverse set of research initiatives examining the region’s evolving energy landscape. The discussion explored the importance of just and inclusive principles in energy transition; hydropolitics in the Mekong River Basin, with a focus on China’s domestic drivers and regional influence; and developments in nuclear governance, including the potential application of Small Modular Reactors (SMRs) in Southeast Asia, with a deeper examination of Singapore as a case study.



RSIS Seminar by Prof Peter Frankopan on “Past as Prologue: Historical Lessons from “The Earth Transformed” for Contemporary Climate and Planetary Health Security,” 21 October 2025

The NTS Centre hosted a seminar with renowned Oxford historian Prof. Peter Frankopan, based on his book *The Earth Transformed*, in which he advocates re-evaluating history through an environmental lens. He argued that traditional, human-centric narratives often overlook how climate, geology, and geography have been key drivers of political change and civilisational transformation. Prof. Frankopan also connected these historical precedents to today’s ‘uncharted territory’, underscoring accelerating challenges such as rising sea temperatures, air pollution, and the particular vulnerabilities faced by Singapore.



RSIS Webinar on “25 Years of Women, Peace and Security in the Indo-Pacific,” 28 October 2025

To commemorate the 25th anniversary of the Women, Peace and Security (WPS) agenda, the NTS Centre at RSIS partnered with UN Women to organise a two-part webinar series. The initiative aimed to take stock of the progress made by states, civil society organisations, other non-state actors, and regional bodies in implementing the four pillars of WPS; protection, prevention, participation, and relief and recovery, across the Indo-Pacific. It also sought to highlight emerging security threats in the region, with particular attention to their impacts on women and girls.



RSIS Workshop on Revisiting Biological Weapons Convention Confidence-Building Measures: ASEAN Perspective, 18-19 September 2025

The NTS Centre organised the RSIS Workshop on “Revisiting Biological Weapons Convention Confidence-Building Measures: ASEAN Perspective,” which aimed to assess the strengths and limitations of existing CBMs and explore how ASEAN mechanisms such as the ASEAN Defence Ministers’ Meeting (ADMM) and the ASEAN Chemical, Biological, and Radiological (CBR) Defence Experts Network—though not formally part of the BWC framework, can offer practical insights for strengthening BWC-related CBMs in Southeast Asia and beyond. The workshop convened 30 participants from across the Asia-Pacific.



2nd Workshop on "Revisiting Economic Security in Southeast Asia", 4 August 2025

The NTS Centre, in collaboration with the Centre on Asia and Globalisation (CAG) at the Lee Kuan Yew School of Public Policy (LKYSPP), hosted the second workshop on "Revisiting Economic Security in Southeast Asia." The workshop provided a timely opportunity to revisit the concepts of regional economic security and comprehensive security, and to critically analyse their implications for ASEAN's strategies in fostering a peaceful and prosperous region amid current and emerging challenges.



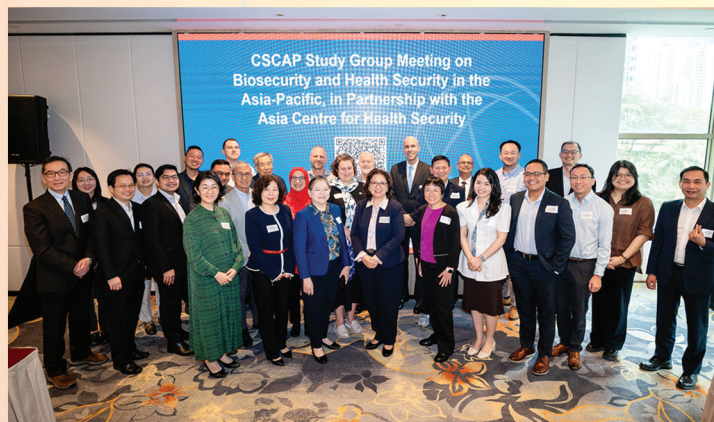
RSIS Roundtable on Non-Traditional Security in a Changing Global Order, 7 April 2025

The NTS Centre hosted the RSIS Roundtable on Non-Traditional Security in a Changing Global Order, which featured in-depth exchanges on how shifting geopolitical dynamics are shaping NTS challenges. The event brought together over 40 participants from government ministries, academia, and the practitioner community for discussions on a wide spectrum of issues, including food security, energy transition, biosecurity, humanitarian assistance and disaster relief (HADR), gender security, and planetary health.



The 7th NTS-Asia Consortium Annual Conference: Changing Geopolitics and Impacts on Non-Traditional Security Challenges in the Asia-Pacific, 8-9 May 2025

The Asia-Pacific region is experiencing the effects of rapid geopolitical shifts characterised by intensifying great power competition and emerging conflicts in the last few years. With the theme of "Changing Geopolitics and Impacts on Non-Traditional Security Challenges in the Asia-Pacific", this year's 7th NTS-Asia Annual Conference brings together NTS-Asia members and experts to deliberate on the significance of such geopolitical dynamics on a wide range of NTS issues in the region, and to explore effective policies to respond to pressing challenges.



CSCAP Study Group Meeting on Biosecurity and Health Security, in Partnership with the Asia Centre for Health Security, 10-11 March 2025

The Council for Security Cooperation in the Asia Pacific (CSCAP) Singapore, represented by the NTS Centre, hosted the inaugural CSCAP Study Group Meeting on Biosecurity and Health Security. Co-chaired by CSCAP New Zealand and CSCAP Japan, the study group facilitated a candid exchange on the diverse biosecurity and health security challenges in the Asia-Pacific, from emerging threats and pandemic preparedness to the risks of new technologies and the development of national and regional governance mechanisms.

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
 - Planetary Health
 - Food Security
 - Economic Security
- Crises
 - Energy Security
 - Biosecurity
 - 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 (IWEPP), Vietnam
- Beijing Foreign Studies University (representing IWEPP 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 in 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

