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AIMS AND SCOPE

The Journal of Defence and Security is a publication of the Malaysian Institute of Defence and Security, MiDAS. The journal publishes original papers and reviews covering all aspects of defence and security. It is a platform to promote awareness on the capabilities and requirements of modern defence & security technologies and policies, covering topics in the areas of, but not limited to, Evolution of Military Information & Communication Systems, Smart Weapons, Modern Vehicle & Aerospace Engineering Challenges, Intelligence, Surveillance & Reconnaissance, Biological & Chemical Terrorism Countermeasures, Personnel Protection & Performance, Military Medicine, Emergent Naval Technology, and Defence & Security Strategic Management.

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Henderson, D.A., The looming threat of bioterrorism, *Sci.,* 283: 1279-1283, 1999.

Online Sources
Hurlbert, R.E., Chapter XV, Addendum: Biological Weapons, Malignant Biology, Available from http://www.wsu.edu/~hurlbert/pages/101biologicalweapons.html. (Accessed on 30 January 2010).

Unpublished Materials (e.g. theses, reports and documents)
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REVITALIZE THE MALAYSIAN DEFENCE INDUSTRIES DEVELOPMENT Vs THE NEXUS OF DEFENCE AND SECURITY ISSUES IN REGIONAL LANDSCAPE

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ABSTRACT

The Malaysian Defence Industries development has always endured a fluctuation period in the history of the military and defence industry in the country. This phenomenon drives more challenges and uncertainty to the national defence and security posture. The country advocates strong empowerment of military organisations and stable political mileage to enable the industry to grow and flourish. With the advancement of new technologies and cyber security threats, the defence and security of the country and the region are affected unconditionally thus seeking ASEAN and ASEAN-led mechanisms to champion further strategic platforms for subsequent action plans. Discussion to illustrate various potential recommendations are vital in the future undertakings of the country and the region.

Keywords: *Defence Industries, indigenous technology, ASEAN, defence and security.*

INTRODUCTION

A prosperous Malaysia as a nation located at the centre of Southeast Asia, is an ideal multicultural country that possesses diverse opportunities. Malaysia is also a nation with continental roots connected to mainland Southeast Asia and Eurasia continent by land. Malaysia's security stability is therefore tied to an uncertain and ever-changing security environment in this region. As a result of the uncertainties at the regional and global levels, the international strategic landscape is becoming more complex and unpredictable. This development has the potential to undermine regional stability and global peace in the long run. However, despite these challenges and the emerging security environment, its unique location has also provided Malaysia with an exceptional perspective to seek opportunities in enhancing ASEAN centrality and the Asia Pacific region.

Acquainted as such, the Malaysian Defence Industry has evolved over the years. The Malaysian defence industry has experienced an enormous transformation in the defence paradigm, particularly in the evolution of the security and defence of this nation. It involves the emergency era, the independence period, the post-Cold War era and the current generation period. The local defence industry has developed since then, and the progress of the sector was uncoordinated and ad hoc though, with the Armed Forces' basic equipment requirements satisfied through 'in-house' military facilities geared towards the needs of the separate service branches of the Army, Air Force and Navy.

Thus, the first two decades of Malaysian defence industrialisation were concentrated and reflected by the process of public investment in key but primary sectors, with the progress both gradual and non-ambitious. The principal objective at that time was the creation of a modest but credible defence industrial capability able to provide first-line logistical support to Malaysia's Armed Forces (MAF) in the form of through-life maintenance, repair and overhaul (MRO).

Presently, the primary purpose of creating and as such developing the indigenous defence industry was driven by technology transfer in the form of training, know-how, joint development, local production and sub-assembly, among others besides the main principle is to foster local employment opportunities. At the same time, over recent years, however, offset deals projects have increased the importance, incorporating a rising proportion of indirect offsets, due to Malaysia's recognition of the growing importance of dual-use technology in the broader defence economy. These indirect offsets have been mainly targeted on foreign commercial technology ventures, such as GPS, drones, digitalise equipment and IT projects. (Kogila & Matthews, 2009).

POTENTIAL OF THE MALAYSIAN DEFENCE INDUSTRY

At the national level, it is seen as there is no concerted effort to ensure that policy relating to defence industry development is implemented effectively. The role of the defence industry is very challenging to meet the requirement of national defence requirements. It should be concerted efforts involving other pertinent government agencies, private sectors, NGOs and personal capabilities expertise. The involvement and the role of MDIC (Malaysian Defence Industry Cooperation) together with MIDES (Malaysian Industry Council for Enforcement and Security), SMEs with the support from the Ministry of Defence should be capitalised and expanded. The criteria or approaches that need to encompass to meet the national defence requirements are as follows (DWP, 2019):

1. Stimulating research and development. Developing focused capabilities in defence science, technology and industry based on R&D across critical technology sectors;

2. Encouraging economic spillover contributions to the nation. Benefits from defence science, technology and industry are anticipated to spill over to other economic sectors, thereby serving as one of the drivers for the nation's economic growth;

3. Fulfilling the nation's defence needs. The defence science, technology and industry establishment equip and sustain some of the defence needs, creating a resilient and long-term cycle of self-reliance. This role is vital in supporting Malaysia's defence pursuit of self-reliance in selected niche areas. The vibrant local defence industry is essential for the realisation of sustainable self-reliance in producing critical assets and defence equipment.

In the process of developing the structure of the defence industry, the necessity of creating a firm base of research and development (R&D) foundation is essential. Currently, the R&D in this field is strategising under STRIDE (Science, Technology and Research Institute for Defence), Ministry of Defence. STRIDE's task is to supply scientific and technical expertise to the MAF. The Agency has collaborated with several defence companies and universities on defence R&D projects. The STRIDE's concern has always been the lack of government funding for defence-based R&D. Furthermore, a body called the Intensification of Research in Priority Areas (IRPA), under the Ministry of Science and Technology, besides providing support to R&D, also assists in giving low-level priority for defence-related R&D research projects. It is due to the lack of both commercial value and dual-use application.

DEVELOPMENT OF INDIGENOUS TECHNOLOGY CAPABILITIES AND BEYOND

The way forward to develop indigenous technology capabilities in Malaysia should start with a firm base. Mustafa Kemal (2015) explained that indigenous technology development is the process of developing an authentic product using the maximum rate of domestic capabilities (utilising technical assistance mainly based on research and development). Technology development includes the design, building, modification, or improvement of the prototype of a vehicle, engine, instrument, or the like as determined by the basic idea or concept (Hagan G., 2009).

The support and guidance from the government in indigenous technology capabilities are essential. The strategic planning to establish such an industry should be embraced by all stakeholders. There is a potential platform to capacitate the sector and should be manifested by a productive and functional organisational approach mechanism. Having an inspirational leadership personality with an influential organisation committee can be a platform to generate optimisation of such technology. An efficient organisation may lead to the implementation of specific training and consultation, encouraged SME's involvement, and introduced new guidelines and policy matters to protect such sector. By focusing on this effort, the government may assist in funding and allocating a sufficient budget and invest in the promotion of local products to optimise the industry.

Subsequently, at this juncture, the Malaysian Institute of Defence and Security (MiDAS) may facilitate broadening the horizon and keeping abreast with current technologies by organising seminars and holding roundtable talk discussions among stakeholders, industry players and government representatives to evaluate, explore and analyse the future of indigenous defence industry in Malaysia.

The geopolitical stability and regional security of ASEAN countries positively affect the paradigm of the defence industry and the regional defence policies. Despite the unprecedented pandemic situation, ASEAN countries continue to have an indecisive mechanism effort. At present, the concentration of the national defence environment priorities is more towards defending against the threat from South China Sea vicinity. Understandably, there are relentless burgeoning issues on numerous overlapping claims of islands by respective countries of China, Vietnam, Philippines, Taiwan, Brunei, etc. The intensity of threat is evident with multiple engagements of sea forces visible in that area mostly dominated by China and the US to show their presence as such may escalate different scenarios of undesirable circumstances. Hence, this scenario would indicate the persistence of the national defence industry to prevail.

Malaysia shall have a strategy to maximise the indigenous defence industry by adapting six key elements as follows:

1.   Reducing fiscal deficit. Implementing such measures helps the economy of the country and is marketable for ASEAN countries' defence procurement.

2.   Leveraging the Defence White Paper (DWP). The DWP remains vital to provide policy guidance for defence management with a strategic plan outline to strengthen the military's standpoint and national interest. In tandem with this development, the Ministry of Defence is putting together the National Defence Industry Policy (NDIP) which is a comprehensive strategy and mechanism to transform the current local defence industry to be more competitive, sustainable and persevere in years ahead.

3.   Security and Strategic Imperative. The security threat is imminent in this region of ASEAN. Malaysia is a strategic country to lead the ASEAN countries and develops security measures by enhancing the defence industry domestically from various cooperation avenues within ASEAN countries.

4.   Smart Partnership Collaboration. Develop a synergy of incorporating among all ASEAN countries to develop a bond defence industry to capitalise on region market volume. For example, establish standardisation of producing military apparel, consisting of clothing, shoes, helmet gears and accessories from defence companies/manufacturer among ASEAN countries and equally divide the profit gained from these venture partnerships.

5.   Employment Opportunities. Defence industries and manufacturing development will pave the way for a more eccentric generation of employment opportunities to diversify domestically, especially during this challenging period of pandemic uncertainties.

6.   Instill Nationalism and Patriotism Spirit. In developing the defence industry locally, all Malaysians should be inculcated the spirit of defending the nation with pride and embrace the nationalist spirit of togetherness from all walks of life.

It is apparent that innovative technologies in the defence industry are inevitable. The ever-changing technologies enhance the defence landscape in the region in terms of C4ISRT and IT certainly gives a diverse exploration of the indigenous industry to develop. In Malaysia, we need to understand the big scenario and exploit the needs of the local defence industry. For instance, the development of drone mechanism technology certainly involves the security and defence industry in Malaysia. In the current situation, drones are used during this pandemic crisis to evaluate the real surroundings from places unreachable by road transportation. If we can reconnoitre and utilise drone technology from defence and security perspectives, we may witness the local indigenous defence industry flourish and expand sensibly. In this aspect, there is also room for consideration to have a civil and military collaboration understanding efforts.

There are undeniably significant initiatives and efforts to boost the defence industry but not particularly in the field of the indigenous defence industry. The government aspire to implement defence industrialisation through a public-private partnership. Efforts have been made to increase local defence industry capabilities through government initiatives at various levels, including local content requirements and industrial participation through defence procurement and offsets, promotion of defence industrial collaboration through bilateral defence industry and

defence science and technology cooperation and the award of long-term contracts to deserving local industries (Kogila, 2008).

A proposed collaboration between the defence and commercial sector to develop locally built technologies are positively encouraged. This synergy between two sectors or other agencies may result in extensive cooperation and venture towards more productive local industry products. This certainly benefited the country in the long term period. Countries such as India, Turkey, South Korea and Indonesia have conducted such ventures and they proved to be among the prosperous defence industry countries in the region. Ironically, such collaboration would take into consideration the prospect for this industry to materialise in the next 10 to 20 years ahead. The partnership should also remain intact without any interference from the political leadership or bureaucracy shortcomings. The strategic planning of the way forward in the indigenous defence industry should also be the main focus for the government to pursue and continuously support this initiative despite the current political turmoil or changes of the ruling government.
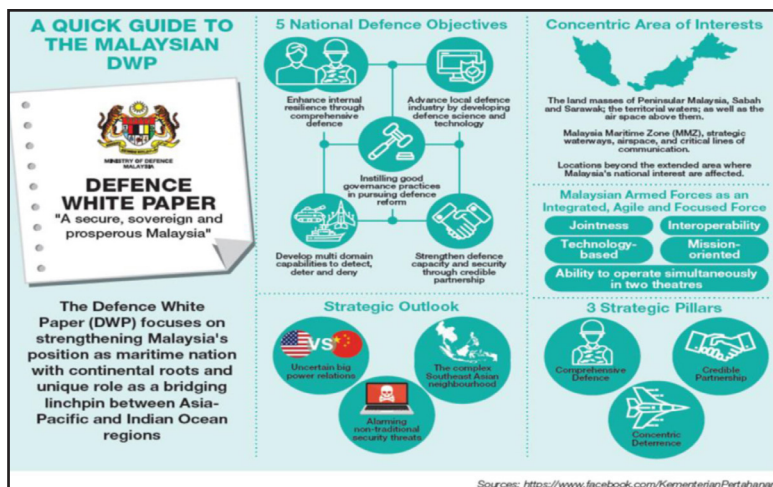
EMERGING TECHNOLOGY AND SECURITY ENVIRONMENT CHALLENGES

Malaysia stood as a country not tormented by military threats or conflicts now and has flourished over 30 years of peace since 1989. However, peace was initiated upon the blood, sweat, and tears of Malaysian servicemen. Mindful of this reality, Malaysia published its first Defence White Paper (DWP) in December 2019. Likewise, currently, ASEAN is facing an emerging security environment on a more serious scale and scope than it has ever experienced before. Therefore, this discussion revolves around regional and international issues concerning the threats/security challenges towards ASEAN and ASEAN-centric security mechanisms in defence and security as well as highlighting opportunities in enhancing confidence-building measures and cooperation for peace and stability from Malaysia's perspective. The three main security issues that have been identified include the evolution of rivalries, the intricacy of the Southeast Asian region and increasing non-traditional security threats. Developments in recent years suggest that these three main factors will become more intricate and need to be accustomed appropriately.

Security Health Issue

The COVID-19 pandemic remains the number one security issue for the ASEAN region. As of early May 2021, the numbers of new cases are still high for Cambodia, Indonesia, the

Philippines, Thailand and Malaysia. That shows that half of the ASEAN countries are still grappling to contain the virus. While vaccination programs are already on the roll, the number of people who have been vaccinated is still low. Based on statistics, each ASEAN country showed 0 to 7% of their population that has been vaccinated. Therefore, the ongoing vaccination process indicated another challenge for ASEAN in dealing with the pandemic. ASEAN countries are caught up in the global race to get their population vaccinated.

THE EVOLUTION OF RIVALRIES

The phenomenon of rivalries between the US-China interactions and their relations has marginally affected the region. As such, the escalating power competition is concerted more towards Southeast Asia. China's presence in the South China Sea, along with the US Freedom of Navigation Operations (FONOPs) and other powers' similar actions have turned the overlapping sovereign claims issue into a big-power game. Parallel to these developments is the revival of the Quadrilateral Security Dialogue (the Quad) by Australia, India, Japan and the US in 2017. The Quad countries emphasise the importance of rules-based order, underscoring the freedom of navigation and openness of sea lanes while promoting sustainable infrastructure development practices.

Nevertheless, the increasing activities by big power competition and their attempts to increase influence may cast shadows over Southeast Asia's stability and prosperity, potentially challenging ASEAN centrality. In fact, it has caused a wide range of uncertainties, posing growing risks towards Malaysia's security and regional stability. Southeast Asia is the ground zero for the US-China relationship. Many discourses have been organised by all parties concerned. Nevertheless, the situation remains tense. In terms of military expenditure, 2020 saw the US (39%) and China (13%) as the top two countries in the world with the highest military spending. In 2020, the US spent USD 778 Billion and China USD 225 Billion on their military spending.

There was an increase of 5.2 per cent in military expenditures in 2020 for Southeast Asian countries. Singapore has the highest spending with USD 10.9 Billion, followed closely by Indonesia with USD 10.9 Billion, Thailand with USD 7.3 Billion, Vietnam with USD 5.5 Billion (estimate), Malaysia with USD 3.8 Billion, Philippines with USD 3.7 Billion and Myanmar with USD 2.4 Billion. The data shows that, with all the military expenditures of Southeast Asian countries combined, it is still a tiny percentage of the military spending of the US and China. It indicates that the region is far behind in military procurement.

Possible reasons would be that the region has no intention to compete with the superpowers, and such a move would still be futile. It depicts the strategy of this region that upon escalation of tension between the US and China, the region may rely on the US for military cover. However, it must be noted that this region is still neutral and should continue to do so in the superpowers' competition.

In this situation, apart from having a firm foreign policy, defence diplomacy also plays a crucial role to ensure that the region maintains its peace and stability. ADMM Plus must be proactive in organising and managing defence diplomacy. Having the US, China and other ADMM Plus members in a single military exercise would be a worthy effort to diffuse the tension. ASEAN should also take advantage of the Biden administration for the US to re-engage multilaterally in this region. This strategy could provide more balance cooperation and engagement between the ASEAN and the superpowers. The region should persuade the superpowers to assist them in Covid 19 economic recovery and support the vaccination process, either providing vaccines or setting up vaccine production facilities in this region. Such moves would give a better impression and image for both superpowers.

THE INTRICACY OF THE SOUTHEAST ASIAN REGION

Malaysia is the only country that shares borders with the vast majority of Southeast Asian countries, either land or maritime. Due to the nation's geographical centrality in Southeast Asia and colonial legacies in the region, Malaysia has yet to resolve land demarcation and maritime delimitations issues with some of its neighbours. In addition to territorial and sovereignty disputes, other bilateral issues are affecting Malaysia's interests in the neighbourhood. These include (1) conflicting interests extended from territorial disputes (2) contentious spillover from internal conflicts of neighbouring countries; and (3) refugee crises sparked by regional states' domestic issues.

These problems affect nearly every country in the area or neighbourhood and mostly could not be handled effectively by any country alone. Such problems encompass both traditional and non-traditional security challenges, including extremism, sea robbery, piracy and cross-boundary environmental issues such as haze problems resulting from forest fires in neighbouring countries as well as cross-boundary infectious disease outbreaks such as COVID-19.

THE NON-TRADITIONAL SECURITY THREATS

Non-Traditional Security (NTS) issues involve non-state actors and trans-border crime with an asymmetric character, which have direct as well as indirect impacts on social, political, economic and environmental sectors. Terrorism is among the main NTS threats to Malaysia. Apart from terrorism, threats such as extremism, radicalism, hijacking, and cyber-attack, as well as disease outbreak, might disrupt internal stability. Other threats such as sea robbery, kidnapping and illegal fishing might disrupt Sea Lines of Communication (SLOC) and affect the safety of navigation, thus resulting in losses to the nation. At the end of last year, we heard the news of a new type of virus that was recently named Covid-19. Although the epicentre of it was in Wuhan, China but despite efforts done to contain the outbreak it has now spread to over 32 countries. Just last month, at the end of the ASEAN Defence Ministers' Meeting (ADMM) Retreat in Hanoi, a joint statement on Defence Cooperation against Disease Outbreaks was adopted; this is certainly a great milestone to show that ASEAN remains relevant.

Terrorism Menace

Terrorism is still an issue of concern for this region. Due to COVID-19, 2020 saw a decline in attacks and arrests of terrorists in this region. Nevertheless, terrorists are still active in spreading their propaganda through social media. In December 2020, Singapore's Internal Security Department (ISD) detained a 16-year-old Singaporean youth who planned to attack two mosques with a machete. The suspect was reported to be radicalised online by Christian Far-Right extremists. In March 2021, also in Singapore, the authorities arrested a 20-year-old Singaporean National Serviceman who planned to attack Jewish men outside a synagogue. Similar to the earlier scenario, the suspect, too, was radicalised online.

Recently, there were a few attacks in Indonesia: the Makassar Church attack and the attempted attack on the National Police Headquarters in Jakarta. Both attacks occurred in March 2021. In addition, there were a series of arrests of terrorists in Indonesia. On 8 May 2021, over a hundred members of the Bangsamoro Islamic Freedom Fighters (BIFF) occupied the Datu Paglas town market in Maguindanao for several hours, forcing several families to flee their homes. It remains to be seen whether Marawi 2.0 is in the making. The region should still maintain its focus on managing terrorism issues. Even though more efforts are currently managing COVID-19 and the great powers' competition, the region should not neglect the terrorism threat. Daesh affiliates remain a security threat, and authorities should also be wary of the possible rise of far-right extremists in this region.

OPPORTUNITY TOWARDS ASEAN REGION AND BEYOND

The three challenges discussed may present opportunities not only for Malaysia but for other regional countries in the Asia Pacific as well. However, at the same time, these confidence-building measures and cooperation for peace, stability and a security environment may also complicate regional cooperation. ASEAN and ASEAN-led mechanisms with other Asia Pacific region countries must continue to serve as indispensable platforms for mitigating all of these challenges. In June 2019, ASEAN issued the "ASEAN Outlook on the Indo-Pacific". Overall, this document interprets ASEAN's in creating a safe, peaceful and prosperous environment in Southeast Asia and Asia-Pacific regions. Malaysia has also identified four opportunities to enhance ASEAN proximity and beyond.

Humanitarian Assistance and Disaster Relief (HADR)

The natural disaster remains the highest cause for mobilising HADR operations however, it is no longer the only form of challenge that requires HADR. In recent years, manmade disaster and disease outbreak has also increased and provided a challenge to ASEAN Member States (AMS). For the past years, the importance of HADR has been highlighted in numerous paragraphs within the Joint Declaration of the ADMM. Furthermore, AMS leaders at the highest level have all signed the ASEAN Declaration on One ASEAN, One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region in September 2016. Malaysia being the initiator of the ASEAN Military Ready Group (AMRG) on Humanitarian Assistance and Disaster Relief (AMRG on HADR) has tabled AMRG on HADR SOP at the recent ADSOM Working Group. It is hoped that AMS will continuously support the adoption of AMRG on HADR SOP.

Cyber Security Domain

The cyber domain is similarly becoming an increasingly more important space. The use of cyber capabilities enables both enemy nation-states and non-state actors to influence the hearts and minds of the people and the international community, to target otherwise physically hardened areas, and to hide their activities from the public eye. It enables hybrid warfare, further blurring the line between traditional and non-traditional security threats. Meanwhile, the development of artificial intelligence combined with the cyber domain will make the current inventory of weapons even more lethal, as exponentially increasing computing power will also lead to faster target acquisition and processing, thereby shortening the kill chain. What was once the domain of science fiction movies and books has now become a real possibility. Therefore, knowing this is an area in which much could be achieved Malaysia and the Republic of Korea or ROK shall be co-chairs in the ADMM-Plus EWG on Cyber Security from 2020 to 2023.

Maritime Security Perspectives

Geographical location confers both advantages and disadvantages. While proximity is the source of bilateral issues, it also has put Malaysia and our immediate neighbours in a state of interdependence in security, economy and social spheres. Strategically located between the Indian Ocean and the Pacific Ocean none of the ASEAN member states is singly able to ensure the security of the strategic waterways within the region. ASEAN has made a great stride in this area with the Guidelines for Maritime Interaction being adopted last year during ASEAN Defence Ministers Meeting.

Other maritime security initiatives in the region, includes Malaysia, Indonesia, Singapore and Thailand coordinating maritime patrol programs, under the Malacca Straits Patrol (MSP), to combat sea robberies and other forms of maritime security issues. A similar initiative was also implemented to increase the level of maritime security in the Sulu and Sulawesi Seas through the Trilateral Cooperative Arrangement (TCA) between Malaysia, Indonesia and the Philippines signed in 2016. These collaborations illustrate the efforts of regional countries in pursuing the main objective of regional peace, security and stability. However, these initiatives have the potential to be taken a step further to the regional level and thus enhance ASEAN centrality in the maritime security domain.

The linkage between ACDFM and ADMM

In 2018 the ASEAN Chief Defence Force Informal Meeting (ACDFIM) has been acknowledged formally by ADMM. Hence the ACDFIM has been changed to ASEAN Chief Defence Force Meeting (ACDFM). Over the years report of the meeting held by ACDFIM or ACDFM has been shared at ASEAN Defence Senior Official's Meeting (ADSOM). However, there has never been any link between ACDFM and ADMM under the ADMM ambit. With the ever-growing challenges, there is a need to cut bureaucracy and for information to be channelled directly to those in a position to decide. Recognising the challenges faced by the Chief Defence Forces of AMS, Malaysia and the Philippines are co-sponsoring a concept paper on developing the linkage between the ADMM and ACDFM.

CONCLUSION

The main challenges encountered in this indigenous industry are to attain full support from the government with acceptance and recognition from the local industry as well as the stakeholders or endorsement towards our local manufacturing technology industry. The industry's capability is still confined to necessary manufacturing activities and MRO operations, and regional defence manufacturing is still restricted to a limited number of sectors, with minimal R&D activities or export opportunities. Another aspect of the challenges is a consequence of Malaysia's lack of formal indigenous guidelines or way-forward policies, besides the frequent policy shifts in the composition of defence industry planning strategies. However, there is evidence that the idea of developing an indigenous defence industry has certainly given value added in enhancing the local skills capacity. It also deepened the industrial specialisation, promote the development of local supply chains, and contribute to the beginning of foreign defence market penetration.

Finally, COVID-19 and other non-traditional security challenges have posed new threats to Malaysia. Even as the country deals with the pandemic, other security threats continue to escalate as is evident by the tensions in the South China Sea, and the broader global and regional instability as can be seen by intensifying U.S.-China rivalry, and the recent clash between China and India at their border. Malaysia is also faced with increasing threats from non-state actors in the maritime domain, with the risks of illicit criminal activities, terrorism networking and kidnapping for ransoms still lurking in nearby waters. Malaysia can also aspire to play a more proactive and constructive role in ensuring the peace and stability of the region, leveraging its geographical advantages and diplomatic prowess to punch above its weight.

Post-COVID-19, a lacklustre economic outlook is likely also to compel governments to take a harder look at expenditures. The Malaysian government needs to make wise choices to ensure investments in defence, which would have long-term implications on its national security, are done strategically and effectively. Instead of this crucial consideration, Malaysia has no time to lose in the face of the rapidly evolving defence and security landscape, and it urgently needs to implement the reforms identified. A clear indication of the government's vision will undoubtedly provide a much-needed impetus in facing the future of uncertainties.

The Malaysian government is committed to pursuing a multi-pronged approach to effectively defend the nation's security and interests in the Southeast Asian region including via ASEAN, ASEAN-led mechanisms and the Asia Pacific region. Efforts and inter-agencies alliances within the ASEAN and Asia Pacific Region need to expedite and reviewed for further scrutinised specifically to educate the community on the significance of preserving mutual securities and sovereignty adherence. Hence the regional society shall endure the manifestation of a whole-region-secured civilization in the future undertaking. To enhance ASEAN centrality and beyond the Asia Pacific region, AMS needs to collaborate and synergize our collective strengths and resources to achieve national as well as regional security, stability and prosperity.

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REACTIVATING AND ENHANCING MALAYSIA-RUSSIA RELATIONS: OPPORTUNITIES, POTENTIALS AND CHALLENGES

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ABSTRACT

Malaysia -Russia relations can be described as that of a simple past and complex future. The simplicity of their relations in the past may be ascribed to the simple and clear situation in international relations. The fall of the USSR and the end of the Cold War ushered in a period in which situation is no longer as simple and clear cut as it was. The new period saw inter-state relations governed and influenced by a host of factors and actors interacting with each other , in partnership or in competition. Reactivating and enhancing Malaysia-Russia relations in an ever-changing geopolitical and international environment offer not only opportunities of mutual benefits, but also challenges that may derail good intentions. In the past, many efforts at the official level have been done to bring their relations much closer, without much success. This paper aims to discuss the evolution and development of Malaysia-Russia relations, the areas of opportunity, as well as the obstacles and challenges that may stand in the way of realising a mutually beneficial relationship.

Keywords: *Malaysia -Russia relations, factors shaping relations, opportunities, challenges.*

INTRODUCTION

Malaysia-Russia relations have evolved over the years and periods in international system. Diplomatic relations between Malaysia and the then Union of Soviet Socialist Republics (Soviet Union) were established on the 3rd of April 1967, and consolidated in 1968 with the exchange of ambassadors. The establishment of diplomatic relations was remarkable since Malaysia at that time pursued a foreign policy of " pro-West and anti-communist " under its first Prime Minister, Tunku Abdul Rahman Putra Al-Haj. It was not until 1970, when the second Prime Minister, Tun Abdul Razak re-oriented the country's foreign policy to that of non-alignment. The shift towards non-alignment allowed Malaysia to recognise other communist countries such as China and countries of Eastern Europe. But despite this change in foreign policy orientation , Malaysia's relations with communist countries remained limited in scope and content. During the Cold War period , Malaysia's relations with the Soviet Union remained cordial , was also subjected to several constraints, internally and externally. Malaysia, politically had always been part of democratic world , espoused Western liberal democracy and its values , maintained close political, economic security and socio-cultural relations with non-communist countries, especially the West. The USSR, on the other hand was the leader of the communist world , espousing a political system and an ideology that Malaysia fought against internally. The long years of struggle against communist insurgency in Malaysia to a large extent shaped the thinking and attitude of its people towards communism and countries associated with the ideology and political system. This ideological and political differences left a great impact on many Malaysians with regards to their attitude and view of Russia, even after the end of the Cold War. The collapse of the USSR and the end of the Cold War ushered in a new period , more complex than the previous one ,necessitating adjustments in countries' foreign policy options and preferences. Russia , more than any other countries has been subjected to the consequences of the collapse of USSR and the end of the Cold War. Strengthening Malaysia-Russia relations in the post-Cold War era , it is inevitable to take these changes into consideration, and at the same time aware of the lingering effect of past differences .

Malaysia-Russia relations have not featured prominently in discussions on Malaysia's foreign policy . A brief glance at literature on the subject reveals a scarcity of resources about issues and extent of their relationship. Most references and discussions on the subject offer a rather sketchy , topical and often pessimistic picture of the scope and future of Malaysia-Russia relations, especially in the context of contemporary geopolitical environment. It is not unusual to see predictions such as "warmer ties with Russia unlikely" or urging Malaysia to be harsher towards Russia in the Ukraine-Russia conflict. On the whole, most discussions focussed on expanding economic , trade and business interactions as means to rev up Malaysia-Russia relations. Malaysian government agencies such as MITI, MIDA, MATRADE published periodically reports on events and development taking place in the business and trade communities of both countries. The Malaysian Ministry of Foreign Affairs (Wismaputra) also provides valuable information and reports on the situation related to bilateral relations between the two countries. These reports have proven useful to fill in the gaps on information on contemporary political and economic relations. As for academic writings about Malaysia-Russia relations, it is fair to say that Russia has not been a popular topic of research among Malaysian academics and researchers. The lack of availability of resources necessary for in depth study on the subject contributed to this situation. Of late, however, a number of events led to an increasing interest on Russia among Malaysians , out of professional reasons or personal interests. It is also observed that socio-cultural events have more frequently surfaced providing Malaysians with information on 'happenings' related to Malaysia and Russia.

Figure 1: Malaysia-Russia Long History

AN OVERVIEW OF MALAYSIA-RUSSIA RELATIONS

Malaysia first established diplomatic relations with the Union of Soviet Socialist Republics (USSR) on the 3 April 1967, the first with a communist country. This was significant as at that time Malaysia's foreign policy was that of "anti-communist and pro-West during the early years of its independence. It was not until 1970 when Malaysia's second Prime Minister, Tun Abdul Razak Hussein opted for a foreign policy of non-alignment , setting the tone and trend for Malaysia's foreign policy in the years to come. Still, by the end of the Cold War in 1991, and after more than 50 years of the establishment of diplomatic relations, the scope and contents of their relationship remained limited, despite cordial political relations between Moscow and Kuala Lumpur, strengthened through official visits by Malaysian leaders to Moscow. In 1967, Malaysia's second Prime Minister , Tun Abdul Razak Hussein, the architect of Malaysia's non-alignment policy, made an official visit to the then USSR. The visit, as noted by the US embassy officials in Moscow, " went off smoothly . Soviet Premier Kosygin and Tun Razak signed agreements on economic-technical and cultural-scientific cooperation". In 1979, Razak's successor, Tun Hussein

Onn made a 2-day working visit to Moscow with the aim of strengthening Malaysia's relations with USSR, and to " underline Southeast Asian concern over communist activity in the region." Whether or not this was an essential part of the visit's agenda is hard to verify, but if it was so, it is understandable as there was a genuine security concern in ASEAN region in the aftermath of the communist takeover of governments in the three countries of Indochina. It created tensions in the region, especially on the ensuing 'Cambodia problem' and Vietnamese intervention in Cambodia (1978-1989). It was not until the end of the Cold War , the collapse of the Soviet Union and after Vietnam withdrew its troops from Cambodia, paving the way towards improving relations between Vietnam and ASEAN, culminating in Vietnam joining the regional organisation in 1995. However, Vietnam's relations with Russia remained important in most aspects, including people-to-people diplomacy cultivated and developed over the years. This was not the case of Malaysia-Russia relations.

Dr Mahathir Mohamad, Malaysia's 4th and longest serving prime minister made two official visits to Russia, in 1987 and 2002 respectively. The trend was continued by his successor, Abdullah Ahmad Badawi in 2007. Abdullah's successor, Najib Razak too visited Russia, but in conjunction with ASEAN-Russia commemorative anniversary in Sochi. These official visits by Malaysian prime ministers go to show that there is no lack of efforts to activate Malaysia-Russia relations, at least on the part of Kuala Lumpur.

EFFORTS AT EXPANDING ECONOMIC AND BUSINESS RELATIONS

Malaysia's fourth Prime Minister, Tun Dr Mahathir Mohamad's visits to Moscow in 1987 and in 2002 highlighted Malaysia's active external involvement at that period. The visit came at a time when the USSR was undergoing domestic political reforms initiated by President Mikhail Gorbachev, which ultimately brought an end to the Soviet Union. In welcoming Dr Mahathir, Mikhail Gorbachev said that the visit and talks that have been held would facilitate the further development of relations between the two countries. Dr Mahathir on his part , stressed Malaysia's interest in expanding ties with the Soviet Union, and urged for more frequent exchange of visits between officials of both countries. He also invited President Gorbachev to visit Malaysia, which was accepted by the General Secretary of the CPSU Central Committee, adding that "we have a big interest in that region." However, as proven by events of the period, this was not to be realised. Nevertheless, the path to closer relationship between Malaysia and Russia had been Paved and chartered , even under the Soviet Union which had different political system and ideology from that of Malaysia.
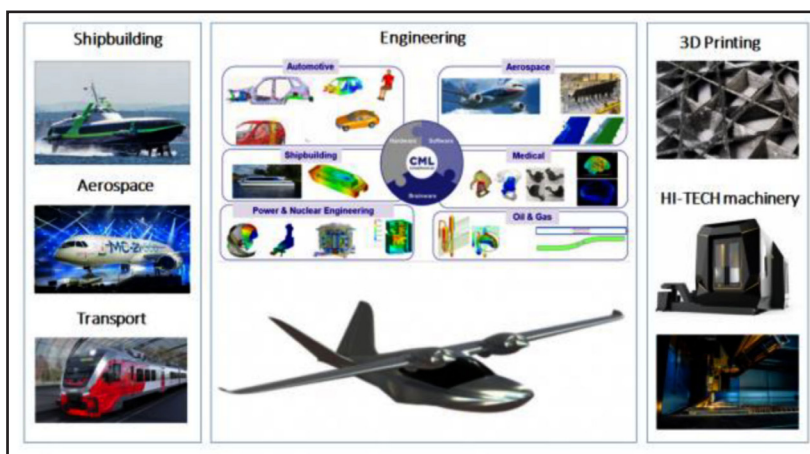

Figure 2: Prospect of Enhancing Collaboration Between Two Countries

Towards the end of his tenure as Prime Minister, Dr Mahathir again visited Russia in 2002, this time with an even bigger delegation. "Mahathir sniffs out Russian opportunities", sniffed Malaysiakini.   His visit was, like that of earlier visits, aimed at strengthening ties with Russia. What is interesting to note is that it was a comparatively big delegation of 250 members, comprising government officials and business leaders set out to explore business opportunities in selected Russian technologies and exploring potential market opportunities. This official delegation included five ministers, three Menteris Besar, the governor of Bank Negara Malaysia and senior government officers.   The business delegation accompanying the Prime Minister was also big-with a total of 150 "Malaysian captains of industry, led by Chairman of Sapura Group. The visit also wanted to discuss issues on the ongoing international war on terror. The Malaysian public however remained uninformed of the reasons for and the results of this numerically important delegation to Russia. But the trip "did enable the prime minister "to obtain first-hand impressions of the new dynamics that prevail in Russia in the post-communist era." At that time, Malaysia-Russian relations were looked at with optimism, given the cordial relationship between Dr Mahathir Mohamad and Russian President Vladimir Putin. One of the consequences of the terrorist attack on New York Twin towers on 11 September 2001 was the souring of relations between Muslim communities and the West, as well as the growing "Islamophobia" in the West, created a desire for Malaysia to look elsewhere to expand its economic, social, and educational opportunities. Russia was increasingly being viewed as an alternative and new place for education. However, not much is known about the success or what came out of this visit comprising of this unusual bloated delegation of important ministers and corporate figures. In 2003, Dr Mahathir Mohamad resigned from office, and with that, many of his foreign policy and domestic policies were put on a backburner.

Prime Minister Abdullah Badawi, Mahathir's successor, also visited Russia in 2007. President Putin of Russia expressed hope that trade between Malaysia and Russia will further expand. At that time, Malaysia was Russia's largest trading partner in ASEAN.During this visit, the two countries signed several agreements including those on investments and protection of intellectual property rights. Prime Minister Abdullah Badawi also proposed Russia to train Malaysian sportsmen and sportswomen , and Malaysia offered to extend its expertise in, among others, the field of Islamic banking, airports and seaports managements, event managements and other services. At that time, Petronas, the Malaysian national petroleum company was also actively working with Russian company Gazprom in developing gas oilfields in Asia. Abdullah also wanted both countries to work together in correcting misperceptions towards Islam following the event of 9/11. It is interesting to note that there were about 2,000 Malaysian students studying in Russia at that time, a much bigger number than the 700 or so today. What could be the reason for this decrease despite the desire to increase cooperation in education?

Abdullah's successor , Dato Seri Najib Tun Razak did not make an official visit to Moscow, but met with President Vladimir Putin during the Commemorative 29th anniversary of ASEAN-Russian Federation Dialogue Partnership in May 2016 in Sochi .   During this bilateral meeting on the side-lines of the anniversary celebration , the two leaders discussed the prospects of further developing Malaysia-Russia relations, in particular in the humanitarian sphere, the economy, investment and military -technical cooperation. President Putin proposed greater connectivity between the two countries. Among the sectors that can increase bilateral relations is tourism , a sector which involves not only business-to-business, but also people-to- people ties. He also suggested the two countries explore direct flights from Kuala Lumpur to Moscow and other parts of Russia to increase connectivity. The Russian president himself visited Malaysia twice, in 2003 and 2005 , in the context of participating in the OIC Summit and ASEAN Summit respectively. Both events were held in Kuala Lumpur. Since the end of Najib's rule in 2018, no

Malaysian prime minister has made any official visit to Russia. The Covid-19 pandemic that broke out at the end of 2019 also slowed down these efforts. The country's leadership was also preoccupied with domestic political issues which were resolved only at the end of 2022.

Current interests in Malaysia-Russia relations, as in the past, inevitably focused on economic , business and trade relations, which have become the 'bread and butter' of today's international relations, Malaysia, included. It is often lamented that Malaysia-Russia economic or trade relations is small in volume, and seen by some as insignificant to rev up bilateral relations. The question is why is this so despite efforts and interests in promoting cooperation in these areas? Even if economic and trade relations will take more time to be noticeable, there are other areas of cooperation that can be promoted, such as in the area of people-to-people diplomacy. This requires not just citizens' participation , but need government initiative and support.

LIMITATIONS AND CONSTRAINTS IN CONSOLIDATING RELATIONS

Seen from the above visits and other official activities, it is observed that both countries have gathered many efforts to activate and enhance their bilateral relations. Question remains to what extent have they contributed to enhance their relations, and if not, what are the obstacles to consolidating Malaysia-Russia relations? Despite the long-established relations in terms of number of years, it appears that there is not much improvements in terms of contents and depths. Many reasons can be accounted for this, namely ideological/ political , geography, history and socio-cultural . In comparison to other countries in ASEAN, it is not an exaggeration to say that Malaysia is one of the 'least open' mentally about Russia, a mind-set which needs more time and persuasion to overcome . The Cold War years and the domestic conditions which prevailed in Malaysia has shaped and influenced Malaysian view of the external world, especially towards communist countries. Malaysia's struggle against communist insurgency has left a mark on the minds of the people about suspicion , even aversion towards anything associated with communism. Fortunately, this situation is unlikely to remain forever. Geographically, Malaysia and Russia are not in the vicinity of each other, and in terms of size and geographical conditions , are vastly different. All these factors may explain the lack of depth and enthusiasm in their relationship. Historically too, there was little to connect the two nations together, unlike other far-away countries such as Netherlands, Spain, Britain or France, or the Middle Eastern countries. European countries were major colonial powers that have established themselves in the Southeast Asian region, of which Malaysia is a part and parcel. Even after their colonies became independent, their political, cultural and economic influence and linkages remained. Russia, on the other hand , enjoyed little of these linkages in the past, thus depriving it of an element that can facilitate interactions in the process of strengthening bilateral relations. As such, more interactions and cooperation in the socio-cultural sphere should be encouraged to enhance Malaysia-Russia relations.

MAXIMISING OPPORTUNITIES : TRENDS AND FOCUS

Since the end of the Covid-19 pandemic in Malaysia and the lifting of constraining measures imposed during the period, economic, trade , businesses and socio-cultural interactions with international communities have picked up and have returned to normality. The Ministry of Agriculture and Food Security of Malaysia announced in February 2023 that Malaysia and Russia are expected to sign a memorandum of understanding (MoU) in the agriculture and fishery sectors. The MoU includes cooperation in modern farming, seedling technology, fishing, and aquaculture. According to the Russian ambassador to Malaysia, Naiyl Latypov, the Russian Federation is ready to export halal products and soybean to Malaysia. If this materialises, then this is indeed a good opportunity for Malaysia given the fact that Malaysia, being a majority Muslim country, has been contemplating to become a 'halal hub' for the region. Trade and economic relations between Malaysia and Russia , despite the small volume in comparison with other big countries who are

major trading partners of Malaysia, is an area that can be further developed in view of the mutual benefit that can be derived from such activities. It is an area that involve both the public and private sectors, hence can command wider interests. Malaysian trade and economic development agencies such as MATRADE, MIDA, MITI and others have been actively promoting cooperation in these areas. MIDA has held forums and joint exhibition with its Russian counterparts to showcase a wide range of Russian high -Tech companies at LIMA, Defence Service Asia (DSA) and Malaysia's Oil and Gas Services exhibition . MATRADE has been trying to explore and expand business opportunities through exhibitions and facilitation of business networks for Malaysian companies. The four main sectors involved were aerospace, food and beverages, medical devices and disposables, as well as electrical products . As these efforts came on the outset of the Covid-19, little is known of their further developments.

One of the most important areas of cooperation between Malaysia and Russia has been in defence matters, more precisely defence purchases. Malaysian sources of defence purchases for equipment for its armed forces have traditionally been countries of the West, notably the US, Britain, and France. Malaysia has also procured Russian defence products for its armed forces, which began in the 1990s, when it obtained a contract to supply eighteen MiG-29 aircraft to the Malaysian Armed Forces. In 2003, Russian President Vladimir Putin visited Malaysia in conjunction with the latter's purchase of Russian jets worth US$600 million. Defence purchases is regarded as one of the most visible results of Malaysia-Russia technical and economic cooperation. Cooperation in scientific areas was given a shot in the arm with the highly publicised collaboration on the training of Malaysian astronauts in 2007. This resulted in the sending of a Malaysian , Sheikh Muszaphar , the first Malaysian national to travel to space under the cooperation programme between the Malaysian National Space Agency and the Russian Federal Space Agency. However, little is known about the impact of this on further development of scientific cooperation between Malaysia and Russia, although the episode has risen awareness about the possibility of collaboration in these areas where Russia is regarded as highly advanced. Further pursuit of the matter lies in large part with the government priorities and affordability.

In the field of education, many Malaysian students looked to Russia to study, especially in the field of medicine. Based on the Malaysian Embassy's record , there are currently 784 Malaysian students currently studying in the Russian Federation . In general, Malaysian students in Russia are of two categories, sponsored students, and private students. In the past MARA, a government agency, has provided scholarships to Malaysian students wishing to study in Russia, mainly in the field of medicine. However, this seemed to have declined in recent years, with several issues surfacing, making Russia less attractive for Malaysians. Compared to other developing countries, Malaysia, for many reasons , showed little interest in taking up opportunities for education in Russia. Facilitating and strengthening Malaysia-Russia relations need political will and clear policy direction from the government. Both the government and the private sector need to collaborate in realising the benefits of expanding educational horizon. An example of policy initiative for such purpose may be seen in 'The Look East Policy' of the Mahathir era which has resulted in close collaboration with Japan in many areas, including educational sphere . Such a policy can be emulated which can serve to strengthen and broaden Malaysia's relations with less familiar areas such as Russia and its Central Asian neighbours. In this way, Malaysia , not only varies its connections, but also expands its alternatives and opportunities in economic and socio-cultural areas, which will facilitate and strengthen people-people diplomacy. Of course, this can only work if there is reciprocal efforts interest on the part of Russia.

People to -people diplomacy plays an important role in cementing a durable relation between Malaysia and Russia. Cultural relations can be enhanced through educational and academic exchanges. In Malaysia, one of the government agencies that could play an important role in promoting such relations is the Dewan Bahasa dan Pustaka (DBP) , the government literary house.

In the past, DBP has collaborated with France in the exchange of knowledge and publications on Malay language, literature and history of Malaysia and the Malay archipelago . Although DBP has been quiet for quite some time, it can be put to use to increase effective interactions with Russian literary agencies or scholars to promote cultural and literary interactions between Russians and Malaysians. Enhancing relations between countries and communities can take many forms, and its success does not have to be measured in dollars and cents, but in creating friendship.

Tourism is another area worth developing in efforts to promote greater connectivity between Malaysia and Russia as it is not merely a matter of business-to-business, but also people -to-people. Former Malaysian prime minister, Najib Razak in a meeting with President Putin assured that "Malaysia can provide Russian tourists with a safe haven for their holidays abroad." .In the past, tourism sector was one of Malaysia's biggest income earners . It was also one of the largest sectors of employment in Malaysia, employing close to a quarter of total workforce in Malaysia. In 2022, Malaysia was ranked 27th out of 50 countries surveyed as popular travel destinations. Russian tourist arrival in Malaysia has also increased in 2022, with a flow recovered by more than 40% from pre-2019 .   Malaysia has yet to become an important and popular destination for Russian tourists, but there are potentials that ought to be explored. Tourism sector is not subjected to political or security decisions , therefore can be promoted with more ease and effectively. Malaysia is not a 'cultural magnet', unlike other countries such as Indonesia, Thailand or Vietnam. Therefore, more efforts should be devoted to 'bringing out' and exposing various Malaysian heritage and culture that can be enjoyed by locals and foreign tourists alike.

FUTURE PROSPECT AND POTENTIAL

The new government under Dato Seri Anwar Ibrahim seems willing to bring back some shine into the lacklustre foreign policy of Malaysia since the end of Mahathir's first tenure. Whether or not this will open a new chapter in Malaysia-Russia relations is still to be seen. But there are attempts on both sides to optimise the good political relations they enjoy with each other to bring attention to the need to expand that relationship for mutual gains. First is to start with 'familiarising ' with each other and exploring views of how two countries separated by distance and past ideological differences can make use of the new situation to their advantages . People-to-people diplomacy is a way of connecting and enhancing relations. Malaysian-Russian socio-cultural events and contacts between peoples have become more frequently reported and are made aware to Malaysian public. Despite some residues of the past image of Russia still lingering among few in Malaysia, in general there is no longer the undaunting fear and suspicion that once characterised contacts with Russian—because they were under communist government. There is a more ease of mingling with business, professional people, and diplomats on both sides. Defence cooperation between Malaysia and Russia has been long established, and should continue to provide the country with alternative sources . People-to people diplomacy can flourish through cultural linkages , just as through educational and business connections. Encouraging Malaysian students to study in Russia must have the initiative and support of the government, just as what has been done in promoting French and Japanese educational institutions to Malaysians in the 1990s.

CONCLUSION

Despite several obstacles that have stood and may continue to stand in the way of revving up Malaysia-Russia relations, there exist convergences and opportunities toward enhancing their relations. It is often said that good political relations can engender more economic , social, and cultural opportunities that can mutually benefit countries. Malaysia and Russia enjoy good political relations, and despite uncertainties created by some events and changes in geopolitical environment, they have minimal impact on bilateral relations. As such it is not too unrealistic to hope for a greater cooperation and collaboration in economic , security , defence and socio-

cultural spheres that will result in mutual gains and benefit. Given the constraints of geography, history, and socio-cultural unfamiliarity with each other , revving up Malaysia-Russia relations needs a clear, well thought of policy direction, supported by integrated efforts of relevant sectors to sustain such an endeavour.

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MARITIME NON-TRADITIONAL THREATS (NTT): SOUTHEAST ASIAN'S PERSPECTIVE

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ABSTRACT

The Southeast Asian region is a geographic location consisting of 10 nation-states. It's surrounded by some of the busiest straits in the world. The connectivity between the Indian and Pacific Oceans that allows for trade, and social interaction within the region will eventually pose security and stability concerns to many. All nation-states either have maritime or land boundaries connected to them. Thus, it has created many non-traditional threats within the region, the focus is on the maritime sector. Malaysia as one of the member states, views the sea as an economically important interest because 23% of its country's GDP is related to the maritime sector.

The major maritime security and stability concerns are subjected to geostrategic environments in the regions such as great power politics issues, maritime security and defence and non-traditional threats issues. To address the identified challenges, there is a need for member states to define the great power politics issues, maritime security and defence and non-traditional threats issues by using the context of UNCLOS as a guide. Malaysia as a member state of Southeast Asia has a Defence White Paper published in 2020 as a principal guideline to address the identified challenges posed by the discussed maritime non-traditional threats. Other member states may consider adopting and adapting the Malaysian initiative in managing it.

INTRODUCTION

Southeast Asia is an area that is between China, India, Australia, and the Pacific Ocean. It is also located between the Pacific Ocean on the east and the Indian Ocean on the west. Natural features, historic tribal distinctions, colonial claims, and political agreements all had a role in the formation of the political frontiers. Peninsulas and islands can be found across Southeast Asia. The coastline of Southeast Asia is made up of gulfs, bays, inlets, and beaches. The numerous oceans, bays, straits, and gulfs that round the numerous islands and peninsulas contribute to the complicated maritime boundaries of the realm. The tens of thousands of islands that comprise the various nations or are located inside their territorial waters form a network of passages and a distinct physical geography. Southeast Asia is made up of a variety of shapes and sizes due to its political boundaries. From eastern India to China, eleven nations make up Southeast Asia, which is typically separated into "island" and "mainland" regions. The mainland countries consist of Myanmar, Thailand, Laos, Cambodia, and Vietnam. The islands of Southeast Asia's maritime region consist of Brunei, East Timor, Indonesia, Malaysia, Philippines, and Singapore.

In terms of maritime security, the Southeast Asia maritime security landscape is steadily evolving (Bradford & Scott, 2022). The changes can be seen in many forms and some are in the initiatives adopted through the ASEAN Sectoral Bodies and mechanisms namely ASEAN Regional Forum (ARF), ASEAN Maritime Forum (AMF), ASEAN Defence Ministers Meeting (ADMM), ADMM-Plus and ASEAN Ministerial Meeting on Transnational Crime (AMMTC) and their subsidiaries bodies. ASEAN member states through the existing ASEAN-led mechanism are increasingly aware of the maritime security concern interconnectivity and that there is no longer a clear division between security users and providers.

MALAYSIA IS A MARITIME NATION

Historically some of the inhabitants of Borneo Island and the Malaysian peninsula have been mariners for generations. Adventuresome Malay and Bornean seamen have travelled to far-

off Pacific Islands, including Australia and New Zealand, as well as the entire area that is now Indonesia. Additionally, they have travelled to Madagascar, the Maldives, and Sri Lanka via the Indian Ocean (Leong A. , 2021). Its geographical circumstances gave birth to the renowned Malacca Sultanate which has amassed its wealth and power through maritime trade and control of key sea lanes, including portions of the Strait of Malacca, which was then and still is a crucial maritime choke point and connecting point for the East-West maritime trading route. The importance of its geographical location has drawn unsolicited attention and exploitation from powerful actors for domination in the Malay Archipelago.

The recurring theme of powerful actors' exploitation is written in the country's historical timeline. The Portuguese assault from the sea at the beginning of the sixteenth century led to the collapse of the Malacca Sultanate. Following the Portuguese colonisation (1511-1641), is the Dutch (1641-1795,1818-1825) and then the British (1795-1818,1826-1957), and Japan occupation (December 1941 – August 1941) before it gained its independence from the British on 31 August 1957 forming the Federation of Malaya before the creation of Malaysia on 16 September 1963 (Ministry of Defence, 2020). The maritime domain has historically been a key tool for the development of political and economic power, and the Malay states and the big powers have projected their military might beyond the oceans.

Malaysia's maritime characteristics are further accentuated by the fact that it is a nation surrounded by seas and separated by intervening waters, with the South China Sea dividing Peninsular Malaysia from Sabah and Sarawak. By virtue of its Exclusive Economic Zone, Malaysia has a sea area which is two (2) times larger than the land area. In between Peninsular Malaysia and Indonesia are the Strait of Malacca and the Strait of Lombok, while between Sabah and the Philippines is the Sulu Sea. Due to its geographical location, it is a maritime nation with continental roots that are connected to mainland Southeast Asia and Eurasia by land, and the South China Sea and the Pacific Ocean on one side, with the Malacca Straits and the Indian Ocean on the other. Hence, as a country surrounded mostly by sea and its national well-being depends on the sea, Malaysia is a maritime nation by all definitions. All maritime nations, big or small, are generally characterised by three attributes. These three attributes are resources, risks and resolve. Malaysia has all three elements:

1. Resources and Interests. Malaysia's prosperity is largely derived from its maritime domain. Trade, commerce, fisheries, transportation, people-to-people connections, and other modes of wealth creation throughout the nation rely on the seas, seabed, subsoil, waterways, airspace and continental shelf;

2. Risks and Challenges. While Malaysia's sovereignty and sovereignty over Malaysia Maritime Zone (MMZ) and strategic waterways, airspace and critical communication lines are challenged by the maritime areas, they are also a source of external threats.

3. Resolve and Action. Malaysia shows its commitment to national interests, influence, and contribution to the region through the maritime domain. Maritime domains enable Malaysia to transform national resolve into an array of regional cooperative mechanisms for protecting its resources and mitigating risks from the sea. As a result of a series of initiatives with ASEAN member states, Malaysia has been able to turn ideas into concrete cooperation agreements in the fields of defence, development, and diplomacy.

Although geographically Malaysia's maritime domain is between the Pacific and the Indian Ocean. It remains connected to its continental root via Peninsular Malaysia. Hence in this aspect, although consisting of critical resources and assets, land-based resources can pose risks, but they are also a source of solutions. External threats and challenges historically, presently and in the future derive from their continental, maritime and airspace origins. Thus, the determination

to promote regional integration and pursue national interests not only extends northward to mainland Southeast Asia but also through and along our continental roots, to potential ties with various parts of Eurasia. It is also expressed by connections or connectivity. Among Malaysia's notable efforts were the Singapore – Kunming Rail Link (SKRL) and the ASEAN-Mekong Basin Development Cooperation (AMBDC) in 1995, and the joint Malaysian-Vietnam submission on the Extended Continental Shelf in 2009. However, despite its continental roots, Malaysia's immersion in the maritime domain appears to concur with geopolitical thinker Nicholas Spykman's dictum, "Geography does not argue. It simply is." (Leong A. K., 2021).

ECONOMIC IMPORTANCE OF THE SEA

An important centre of trade and knowledge between the 7th and 13th centuries was the Buddhist maritime commercial kingdom of Srivijaya, which encompassed parts of Sumatra and the Malay Peninsula and Western Java. At that time, Srivijaya controlled merchant shipping through the Straits of Malacca. From the end of the 13th century, the state was torn apart by war and two important centres of power emerged. First, is Malacca in the 15th century, then Aceh (North Sumatra) and Johor (now Malaysia) in the early 16th century. While Aceh was primarily an important Muslim trading centre, Johor gained importance due to the tin mines in its hinterland and the precious pepper that was grown there. The port city of Malacca was used primarily by Muslim merchants as an important transhipment port on the route between India and China. In the years that followed, western colonisation occurred and they occupied Malacca as well as other ports in the region, including Aceh, sporadically reducing the influence of Islamic merchants (Schröder, 2017). The last colonial power that had gained a foothold in Peninsular Malaya was Britain with Malacca, Penang (Georgetown) and Singapore as major trading hubs. Today Malacca is no longer a major trading hub due to its shallow water, nevertheless Malaysia's maritime economic activities in Malaysia are expected to gradually increase over time.

This is obvious because of numerous reasons among them is that Malaysia shares maritime boundaries with six Southeast Asia countries and three land borders with neighbouring states (One World - Nation Online, 2023). The six maritime border countries are Brunei, Indonesia, Philippines, Singapore, Thailand and Vietnam while the three land border countries are Brunei, Indonesia and Thailand. The waters of the Strait of Malacca have a length of 550 nautical miles. Second is the very busy narrow lane of the Strait of Malacca with about 90 thousand ships per year or about nearly 200 ships every day passing through it (F Nofandi, 2022). The third is the recognition that Malaysia was ranked 25 in the world's most competitive economy in 2021 (Malaysian Investment Development Authority (MIDA), 2021), where 90% of its trade is seaborne (Sekaran, 2022), and finally the emergence of 22 ports throughout the country. Currently, there are seven major ports in Malaysia with Port Klang and Port of Tanjung Pelepas (PTP) making a significant contribution in terms of container volume. Record shows, the nation's two leading ports posted a combined throughput of 24.9 million twenty-foot equivalent units (TEUs) in 2021, with Port Klang at 13.7 million TEUs and PTP at 11.2 million TEUs, their highest achievements to date (Lim, 2022). The contribution of the maritime sector towards the growth of the Malaysian economy will be more significant as Malaysia aspires to become a fully developed nation.

The sea is an essential lifeline and as a nation surrounded by seas, Malaysia's maritime sector is a key contributor to the country's socio-economic well-being. Therefore, with so many natural resources coming from the sea, and many strategic marine spaces to safeguard in a progressively complex security environment, maritime economic activities have also increased tremendously. There is a pressing need for governments worldwide to diversify their economies, particularly in the oceans, where shipping, minerals, oil, and renewable energy are all major industries. The concept of a "blue economy" is not a new one (Ridzuan et al., 2022). SDG14 (life below water) was incorporated into the 11th Malaysia Plan (MP) for the 2016–2020 period as a sign of Malaysia's commitment to having a sustainable ocean by the year 2030. The ten goals of SDG 14 are primarily concerned with marine life and its resources. To maintain the health and

productivity of the ecosystems, Malaysia has agreed to all of the goals for ocean conservation and sustainable development following the rest of the world. Malaysia will benefit from the blue economy in terms of new jobs and economic expansion. One-third of the overall value of ocean-based industries comes from offshore oil and gas, with the other two-thirds coming from marine and coastal tourism, marine equipment, and port facilities (Malaysian Investment Development Authority, 2021). Shipping, shipbuilding, ship repair, port services, oil and gas, fisheries, naval defense, and other law enforcement agencies are the most economically significant maritime industries. Currently, the Malaysian Maritime Industry contributes about 40% of the country's gross domestic product (GDP), says Datuk Seri Dr Wee Ka Siong (Sekaran, 2022).

The booming oil and gas (O&G) sector in Malaysia offers enterprises a clear edge and a wide range of market prospects. It still contributes 20% of Malaysia's annual GDP, making it a significant sector of the country's economy (Malaysian Investment Development Authority, 2021). This sector is targeted to raise total GNI contribution to RM241 billion (USD79 billion) by 2020 from RM 117.7 billion (USD39 billion) in 2011 (Arend, 2013). According to the Ministry of Economic Affairs, Malaysia's total reserves amounted to 6.7 billion barrels of oil equivalent (bboe), with Sarawak having 2.8 bboe, followed by Peninsular Malaysia at 2.2 bboe and Sabah at 1.7 bboe (Third World Network, 2020). Apart from oil, natural gas is abundant in Malaysia with deposits having been discovered in all three regions comprising Peninsular Malaysia, Sabah and Sarawak. For several decades gas has been driving Malaysia's socio-economic growth. In 1998, natural gas took over leadership from oil as the country's single largest fuel source until today, contributing 42% of the national primary energy supply in 2017. The country's total natural gas reserves are 2.48 trillion cubic meters (Malaysian Gas Associate, 2017). However, according to Statista as of the end of 2020, Peninsular Malaysia had approximately 0.57 trillion cubic meters of non-associated and associated natural gas reserves left, a decrease compared to 0.61 trillion cubic meters in the previous year (Statista Research Department, 2023). These figures indicated that the bulk of the natural gas reserve now is mostly in Sarawak and Sabah. In 2021, Malaysia produced approximately 74.2 billion cubic meters of natural gas, an increase from 68.7 billion cubic meters the year before. On average, Malaysia produced around 73 billion cubic meters of natural gas annually (Statista Research Department, 2022).

Marine fisheries are an important industry in Malaysia's fisheries sector, which supports considerable growth in the economy and national food security. The demersal fish population, which are species that reside and eat on or near the bottom of the ocean, has decreased by 88% for the entire nation since the 1960s, according to data from the fisheries department's most recent trawling surveys, which were conducted in 2016 (Selan, 2021). The national wild fish catch has decreased in Malaysia due to overfishing, pollution, climate change, and foreign vessels encroaching into Malaysian waters, including local fishing vessels entering restricted areas (Fathi, Harun, Rambat, & Tukiran, 2018). Unnamed sources from the Fisheries Department claim that the issue of the decline in fish populations began in 2015 as a result of the massive number of catches made every year, with illegal fishing being one of the main culprits. In Malaysia, Illegal, Unreported and Unregulated (IUU) fishing cost us RM6 billion in 2016, and even after stricter enforcement and surveillance, we lost RM4.2 billion in 2019. Once more, the depletion of our fish stocks has been largely caused by overfishing and poaching, which also includes the employment of dangerous fishing methods like fish bombing or blast fishing, the use of dragon traps and push nets, bottom trawling, etc., as well as incursions by foreign fishermen (Loh & Malik, 2022). In 2021, the fishing industry contributed 0.8 percent to the gross domestic product (GDP) of Malaysia (Statista Research Department, 2023). The fisheries subsector generated RM14.88 billion in revenue in 2021 from the production of 1.75 million m.t. of edible fish, 242.5 million ornamental fish pieces, and 24.4 million bunches of aquatic plants. Production of edible fish fell by 2.1%, from 1.79 million mt (in 2020) to 1.75 million mt (in 2021). The fisheries industry production value increased by 7.5%, from RM13.84 billion (in 2020) to RM14.88 billion (in 2021). Figure 1 below illustrates Malaysia's fisheries production achievement in 2021 (Department of Fisheries Malaysia, 2022).
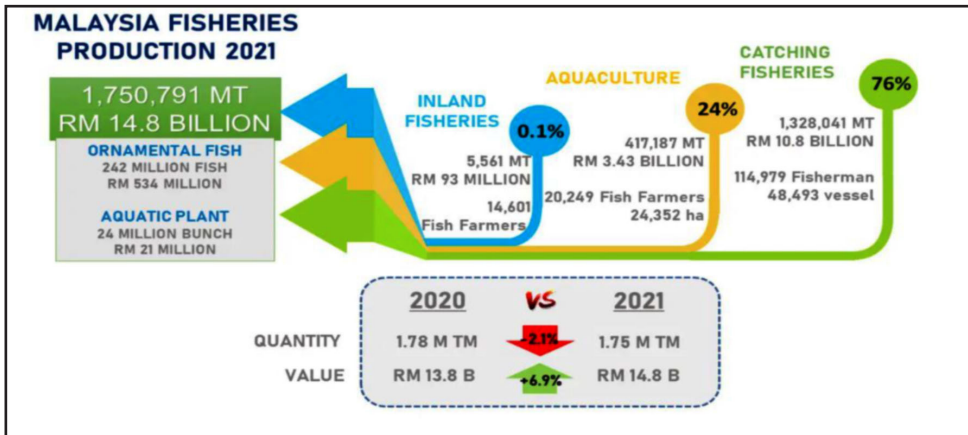
Figure 1: Malaysia's Fisheries Production 2021

A total of 26,100,784 tourists visited Malaysia in 2019, a 1.0% increase. Malaysia saw a gain of +2.4% in tourism receipts, or RM 86.1 billion, as compared to the same period in 2018. Notwithstanding the increase in revenues brought on by the 1.3% increase in per capita spending, tourists continue to view Malaysia as a place that offers good value (Malaysia Tourism Promotion Board, 2021). Maritime tourism, often referred to as marine tourism or coastal tourism, refers to leisure activities that take place in the marine environment, such as cruising, beach activities, scuba diving, snorkelling, fishing, and other sports. Furthermore, in terms of maritime tourism, Sabah Tourism reported there were 3.88 million tourists who have spent RM8.342 billion in Sabah based on recorded tourism receipt recorded. Overall, the Maritime Institute of Malaysia estimated that the maritime sector contributes about 23 per cent to Maritime GDP.

GEOSTRATEGIC ENVIRONMENT

One of the greatest challenges Malaysia faces today is the complex global security dynamics. Most nations are currently struggling to fight economic recession, religious and political differences, unresolved territorial claims, and most recently the Covid-19 pandemic. As these geostrategic challenges change rapidly, Malaysia also faces new security challenges such as Great Power Politics, increasing importance of regional maritime concerns, such as overlapping claims, and the emergence of non-traditional security threats. As Malaysia opens a new chapter under the leadership of Anwar Ibrahim, this new chapter also allows the country to redefine its stance on foreign policy. In his maiden press conference, Anwar highlighted the importance of China and called for enhanced bilateral relations with this regional power. At the same time, Anwar also did not leave out other key partners such as the United States, Europe, India as well as ASEAN and emphasized that relations with these countries are equally crucial. Such statements are most likely deliberate as Anwar has to signal to his foreign partners Malaysia's stance on foreign policy. That he would not upset the status quo (Chong, 2022).

There are five (5) megatrends of the future, that have been identified by countless analysts. These megatrends are anticipated to continue, even though certain important trends will have short-term headwinds and others will experience tailwinds due to events like the Covid-19 epidemic. The epidemic is more evidence of Malaysia's swift technological adoption, as we responded to the problem by immediately implementing new technologies in healthcare, education, and other fields. The megatrends' effects on the world go beyond only business operations and commercial relationships. Instead, they will have a significant impact that will disrupt the military and security contexts in which these businesses, their clients, and countries must function. Reducing risk will necessitate more responsive and responsible government structures as well as increased societal cooperation. The ability to foresee and respond to megatrends will be crucial for the survival of some nations. These megatrends are (1) Shift in Global Economy Power, (2) Demographic and

Social Change (3) Rapid Urbanisation (4) Climate Change and (5) the Rise of Technology (IR 4.0) (Global Government Defense and Security Network, 2016).

The emphasis on world growth has changed. Global economic power domination by the West is a relatively recent historical event that is declining; therefore, the developments we are seeing are fundamentally a rebalancing of the world economies. It's crucial to recognise the interconnectedness of the trade and investment flows between developing markets, which are expanding considerably faster than the conventional routes from developed to emerging and developed to developed countries. This is in addition to the expansion and size of emerging markets. Along with resource investments in Africa and the North Sea, China is also increasing its economic influence in the West. International trade will continue to expand unabatedly even though the East and the South are now the main regions of global growth. As a result, national economies in various regions will become stronger, with more resources both to protect and more resources to invest in security and defence. The change may also lead to an increase in burden-sharing to ensure that commercial trade routes and freedom of navigation are secured from hostile actors, as well as a reduction in some countries' reliance on traditional power projectors like the United States for security. During this transformation, extensive and complex supply chains that aim to optimise national economic advantages may become more susceptible to disruption by cybercriminals engaging in disruptive activities like industrial espionage, theft, or terrorism.

National priorities for government spending are determined by national demographics. As Western populations age, the demand for social services and healthcare will place tremendous pressure on budget priorities, perhaps competing with or even displacing spending on defence and security. Instead, there may be a larger risk of radicalization and civil unrest as a result of the concurrent growth in the adolescent populations of developing markets and least developed countries, as well as a higher possibility that disruptive transnational forces will succeed in establishing themselves in these countries. This could lead to problems with internal and external security that would require more funding and creative approaches to resolve.

Less than 30% of the world's population resided in cities in the 1950s. The UN predicts that by 2030, 4.9 billion people will live in urban areas, bringing the percentage to 50%. According to UN estimates, there will be 22 megacities—those with populations of 10 million or more—by 2015, with 17 of them being in developing nations. The global urban population is expected to increase to 68% by 2050 (Department of Economic and Social Affairs, 2018). Law enforcement, intelligence, and internal security institutions, as well as conventional defence groups, will face enormous challenges as a result of the boom of urbanisation. Urban population growth may exceed governments' capacity to provide basic services, which could lead to a rise in radicalization and the emergence of alternative governance systems dominated by organised crime and non-state terrorist organisations that will illegitimately force/subjugate urban dwellers. It will be expensive and necessitate greater interagency cooperation to provide enough police and security for these locations. Defence sectors will also have to deal with internal instability and keep an eye on outside influences that aim to polarise these people for political reasons. The mega-cities that result from this tendency will also be a more favourable environment for non-state actors like terrorists and revolutionaries, who aim to "hide in plain sight" while wreaking the most havoc and destruction on a populated area. Because of the greater population density in these cities, both natural and man-made disasters will have a greater impact, necessitating a huge, whole-of-government approach to address the humanitarian, defence, and security concerns that come along with them.

Resource depletion and the effects of climate change are causing significant economic concern. By 2030, it is anticipated that energy consumption would rise by up to 50% while the rise in water demand at around 19% by 2050 ("Water for Life" Decade, 2014). Rising sea levels and more harsh weather are two potential effects that could make conventional farming, hunting, and fishing methods difficult or impossible in some regions. The demand for resources to support population expansion and food security may conflict with the need for sustainable solutions. Natural resource disputes have long caused tensions between nations. These conflicts will only get worse and more

important to national survival as the world's population keeps expanding, especially when it comes to the most essential resources like food, water, and energy supplies. Undoubtedly, this will result in conflicts over the rights to water, oil, wind, fishing, hunting, and other mineral resources on a regional and possibly global scale. This issue is made worse by Megatrend Three, which pushes the world's population growth towards urban areas and strains the chain of producers of natural resources to meet considerably greater demand levels. Although it increases the efficiency of these supply chains, it also makes them much more security-vulnerable to disruptions that might have severe effects on much larger populations concentrated in metropolitan areas. This vulnerability will be impacted by global climate change's effects on sea levels, water scarcity, and arable land. Natural disasters will exert pressure on traditional security and defence forces to retain order and provide non-traditional defence services during a humanitarian crisis.

Finally, the last megatrend, innovations in fields like artificial intelligence, nanotechnology, and other research and development frontiers are raising the potential for productivity and creating new investment opportunities. The size and structure of the global manufacturing and high-tech sectors, as well as the businesses that operate within them, are changing as whole new industries are created. Our world will continue to change as a result of the internet, network-capable mobile devices, data analytics, cloud computing, and machine and deep learning capabilities. While advancements in the fields of nanotechnology and other frontiers of research and development increase the productive potential for businesses, they also give malicious actors more tools to increase their capacity for disruption and devastation. With each new technological development that encourages even more automation, analytics, and communications, new vulnerabilities will be generated that will present a unique challenge to the security, defence, and law enforcement industries. The internet, mobile devices, data analytics, drones, artificial intelligence, and cloud computing will give defence and security firms step-function improvements in their ability to assess and respond to threats that will be employing the same, readily available instruments to cause harm. Vendors will also make all devices "secure to the user," preventing intelligence and law enforcement organisations from monitoring users and gathering evidence. Defence and security organisations will face difficulty in creating and modifying these tools at the pace of industry rather than the usual pace of government.

REGIONAL MARITIME CONCERN

The Asia Pacific region is also witnessing realignment and restructuring of middle powers' foreign and security policies. Notwithstanding the global geostrategic concerns, the defence and security focus is from the regional perspective. The issues surrounding the Southeast Asian region are directly associated with the maritime domain areas.

For example, the maritime disputes in the South China Sea involving six (6) countries from the Southeast Asia region. There were many verbal exchanges between government vessels from various claimant countries. Nevertheless, the highlight here is that this kind of incident has been handled professionally and more importantly, there has not been any untoward incident reported involving Malaysia out there in the contested waters. Additionally, the rise of China and US competition in the South China Sea possess additional pressure and challenges to the littoral states. Hence, Malaysia has narrowed down some of those concerns to seven (7) being, 1 - maritime border disputes, 2 - maritime border encroachment, 3 - China and US competition, 4 - extreme ideologies, 5 - ASEAN effectiveness, 6 - Asia-Pacific shifting to Indo-Pacific, 7 - Illegal immigrants.

DOMESTIC/NON-TRADITIONAL SECURITY THREAT

Facing these seven challenges, to move forward the Defence Community need to evolve to maintain a stable maritime regime that promotes our national prosperity and global maritime connectivity. Therefore 'non-military' issues also known as Non-Traditional Security threats, should also be a concern to the Defence Community as it possesses a challenge to the socioeconomic well-being of the country.

Being the nation's most capable maritime force, it is only natural that the role of the Royal Malaysian Navy (RMN) and other maritime enforcement agencies such Malaysia Maritime Enforcement Agency (MMEA) and Marine Police be expanded to include managing these domestic or Non-Traditional Security threats. This concept is not new, as it is being practised worldwide, and is also known as Military Operations Other Than War (MOOTW), which means the use of military capabilities across a range of non-military operations.

Accordingly, the domestic/ Non-traditional security threats that have been recognised are 1- Marine pollution, 2 – Human trafficking/ Illegal immigrants, 3 – Vessel hijacking, 4 – Terrorism, 5 – IUU Fishing, 6 – Smuggling of drugs and contraband, 7 – Sea robbery, and 8 – Kidnap for ransom.

To handle issues on the Non-Traditional security threats during the pandemic a National Task Force (NTF) was established to address the spike of the Covid-19 pandemic in early May 2020. According to NTF's operation from 6 May 2020 until 31 Dec 2022, the statistic reports broken down by each state are shown in Figure 2 below.
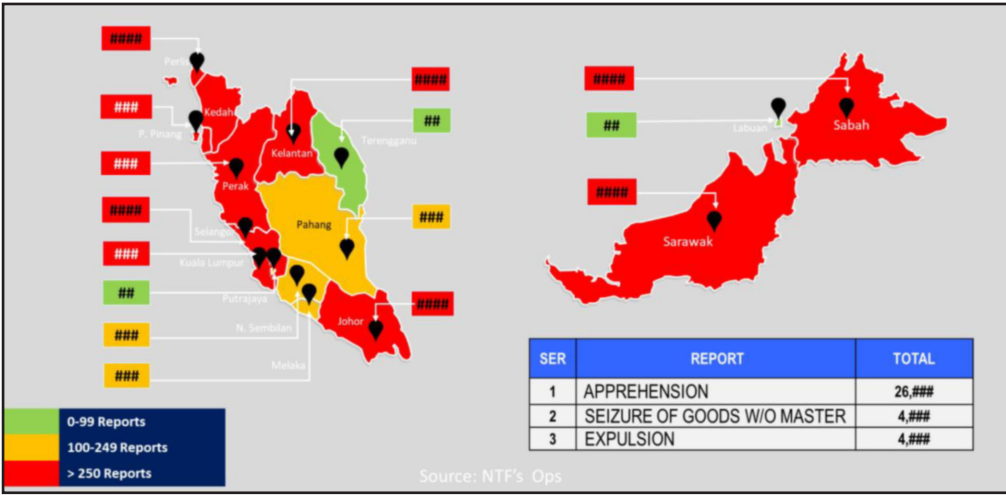
Figure 2: Statistic Reports Broken Down

Cases reported that are above 250 in number as shown in RED. The reports include 1. Apprehension, 2. Seizure of goods without a master, 3. Expulsion. The number reported increases in states which is geographically closer to neighbouring countries.

CHALLENGES TO MARITIME SECURITY

The maritime security issues that arise pose challenges including biodiversity loss, environmental degradation, human rights protections and regulation to manage maritime economic resources. The issues of climate change and new technologies are some of the new issues which

were not factored in during the negotiation of UNCLOS. The use of maritime grey zone tactics is designed to avoid conflict escalation and militarisation of maritime disputes. The tactics pose maritime competition and undermine UNCLOS and freedom of navigation. Based on the regional geostrategic environment, regional maritime concerns and non-traditional security threats Malaysia's maritime security challenges can be further narrowed down as listed below:

1.   There is no definition of maritime security, biodiversity loss and environmental degradation, human rights and labour protections, and the regulation of access to economic resources, including on the seabed and in the water above it (the 'water column').

2.   Some issues are not yet a factor at the time of UNCLOS's negotiation, including climate change and the use of new technologies such as autonomous maritime vehicles.

3.   Tackling the impacts of climate change on maritime security poses both legal and political challenges under UNCLOS due to overlapping jurisdictions, contested sovereignties, and competing economic interests.

4.   While the advent of maritime autonomous vehicles provides a direct challenge to UNCLOS, which assumes vessels are crewed and cannot be operated remotely.

5.   Exclusive flag state jurisdiction is an important principle of the law of the sea, however, the widespread use of flags of convenience poses a particular challenge to maritime security and the enforcement of laws on the high seas.

6.   The use of maritime grey zone tactics is a new and dangerous trend in international affairs. States have traditionally projected naval power to defend their maritime interests. Today, however, China and Iran conduct covert operations and deploy civilian or irregular forces to claim territory in the South China Sea (China) or harass shipping traffic in t he Persian Gulf (Iran). Grey zone operations are designed to avoid conflict escalation and the militarization of maritime disputes. Yet they fuel maritime competition and undermine UNCLOS and freedom of navigation.

WAY FORWARD

To overcome the challenges posed by maritime security, several action and change of attitude need to be taken. Some of the suggestions that can be taken are listed below:

1.   There is an urgent need to define maritime security, new technology and other undefined challenges under UNCLOS. Hence governments might consider working together at defining the undefined clauses or terms within UNCLOS.

2.   The government may wish to consider monitoring new autonomous maritime vehicles carefully and advocate for a clarification of the existing rules if there is an increase in the use of autonomous vehicles for piratical acts.

3.   The government might wish to consider taking a leadership role and working with others to ensure the link between vessels and the state in which they are registered is genuine and substantial.

4.   No mechanism currently exists to manage grey zone tactics, and the leading states have so far refused to discuss these issues hence government should advocate for a mechanism to manage grey zone tactics. Otherwise, grey zone operations will remain a continuing threat to maritime stability and international security, as well as to the global maritime governance regime centred on UNCLOS.

5.   Government should continue to work with its partners and allies to protect and preserve the principles of freedom of navigation not only in the South China Sea but in every region where it is challenged.

Malaysia understanding the importance of addressing maritime issues adopted the Whole of Government (WoG) and the Whole of Society (WoS) approaches to address the Maritime Non-traditional challenges as stated in Malaysia Defence White Paper. In the context of the whole of Government approaches, for example, the formation of a National Task Force, that consists of nineteen (19) other government enforcement agencies in tackling the challenges including the maritime Non-traditional threats. In the context of the Whole of Society approaches, it focuses on Malaysia's defence workforce which covers five main groups, namely the (1) Regular Forces and Reservists, (2) Volunteer Forces, (3) Veterans, (4) Civil Servants in Defence and lastly (5) The People (Rakyat).

CONCLUSION

In conclusion, Malaysia by all accounts and features is truly a Maritime Nation, therefore protecting its maritime interest is paramount to protecting its national interest. Malaysia's action is very much influenced by the dynamics of the Global Geostrategic Environment and Maritime Non-traditional threats. Existing maritime non-traditional threats will remain a major concern for many years to come. Malaysia has outlined a robust and adaptive strategy to address its maritime security challenges in its Defence White Paper (DWP). The DWP strategies outlined are robust. It can adapt itself to ever-changing internal and external influences.

With the DWP in place, Malaysia is seeking to have stable defence funding from the government which allows us to have long-term planning with a predictable budget in which secure and stable funding will allow us to develop procurement planning that is affordable and sustainable for years to come.

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CRIME-INSURGENCE-TERROR NEXUS IN SOUTHERN PHILIPPINES ARMED GROUPS: THE IMPLICATION TOWARDS MALAYSIAN SECURITY

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ABSTRACT

East Malaysia, especially on the East Coast of Sabah, has excellent potential in terms of growth and socio-economic development based on two main elements; geo-strategic and geo-political factors. In terms of geo-strategic aspects, these waters are a hub for international cross-border links connecting the Sulu Sea with the South China Sea, the Sulawesi Sea and the Pacific Ocean. The tourism sector, mostly concentrated in these waters, is one of the significant contributors to Sabah's economic growth. This condition is because these waters naturally provide a natural landscape and panoramas that attract both domestic and foreign tourists to the East Coast of Sabah. These maritime value elements are capable of providing long-term space that promotes Sabah's socio-economic activities, in particular and Malaysia in general. On the geo-political aspect, the east coast of Sabah is also easily accessible by neighbouring countries of the Philippines and Indonesia which can add value to eco-tourism-oriented activities and other activities such as fisheries, trade and shipping. The impact of crime, insurgence, and terror link in the Southern Philippines is significant to the immigrant issue in the East Coast of Sabah. It was initially a social security issue, and it had an indirect impact on national sovereignty. However, the presence of large numbers of immigrants has implications for the demography of the population in the area, education, crime rates, immoral social activities, religious beliefs and teachings as well as the movements of subversive and militant groups.

Keywords: *Militant Groups, Crime, Insurgence, Terror Link Moro National Liberation Front (MNLF), Moro Islamic Liberation Front (MILF), Ideologies, Guerrilla Warfare*

INTRODUCTION

Sabah's East Coast faces security threats due to geo-strategic and geo-political factors resulting from these advantages. Since 1970, when Marcos declared an emergency, any security development in the Southern Philippines had implications for Malaysia (Sabah). Political unrest and movements of separatists, terrorists and criminal groups based in the Mindanao and nearby islands could have direct implications for Sabah, particularly in the Sulu and Sulawesi waters. The wide maritime borders in Borneo waters, which have thousands of small islands (some of them uninhabited), and the length of these maritime borders which are close between Malaysia and Philippines for only a few nautical miles cause Malaysia to face security issues which will occur from the existence of armed elements in the Southern Philippines. Geographical conditions surrounded by small islands have provided a favourable environment for criminals, rebel, and militant groups to use the opportunity in eastern Sabah as a gateway to carry out illegal activities, including arms smuggling, human trafficking and drug trafficking, which the Philippines, Malaysia, and Indonesia are hard to detect. This disrupts the local community's sustainability, directly and indirectly, impeding economic growth and local and national political stability.

In this study, the South Philippine issues demonstrates how crime and terror activities in the Southern Philippines have made Sabah a platform and transit point for state and non-state players to participate in such activities. Furthermore, the implications of the ability to obtain small armed supplies and the weakness of security enforcement have been leveraged by the network of insurgent groups, militant groups as well as cross-border crime groups to commit other criminal

activities such as KFR, robbery, smuggling and terrorism activities in Sabah's waters and inland. The impact of crime, insurgence, and terror link in the Southern Philippines is significant to the immigrant issue in the East Coast of Sabah. It was initially a social security issue, and it had an indirect impact on national sovereignty. However, the presence of large numbers of immigrants has implications for the demography of the population in the area, education, crime rates, immoral social activities, religious beliefs and teachings as well as the movements of subversive and militant groups.

Furthermore, these security issues also affect public's perception of the effectiveness of security forces and government enforcement agencies in performing their assigned tasks. It will also directly affect the authority of the governing government as security forces and enforcement agencies, as well as local governments, are under the direct control of the central and state governments. As such, the issue of immigrants is an issue that has always dominated the political, economic and social security areas of Sabah's East Coast, which is a national issue and needs to be addressed more effectively by the federal government in cooperation with the state government. Bilateral cooperation between neighbouring countries, especially the Philippines and Indonesia and at ASEAN level also needs to be streamlined and reviewed in evaluating the existing implementation and thus making improvements to optimize the impact of implementing integrated initiatives to address this threat collectively.

SOUTHERN PHILIPPINES AS THE SOURCE OF CRIME, INSURGENCE, AND TERROR

Socioeconomic disparity caused by decades-long unrest in Southern Philippines, especially in Mindanao and the surrounding smaller islands facilitate both militants and crimes, which are prevalent in the region. Poverty and violence can cause psychological effects on young people and can drive them into the arms of both insurgency, militant groups and criminal gangs poisoning their idealism and skewing their search for an identity. The fundamental factor for the emergence of armed groups is due to the demand and supply of SALWs in the region. According to Miani, these clusters are a link to arms demand in the Sulu Arms Market especially to the conflict zones in Mindanao as shown in Figure 3.1 and 3.2. Meanwhile, the supply factor is due to the fact that there is a supply of weapons from separatist groups, local/regional arms manufacturers and from the government arms stockpiles. Insurgence, militant and criminal groups around the world and also in the Philippines depend heavily on illegal income streams to fund their activities, thereby morphing into hybrid criminal-insurgence-terrorist organizations. Therefore, this chapter will discuss the actors involved in the conflicts of the region as the catalyst or source for the crime, insurgence and terror.
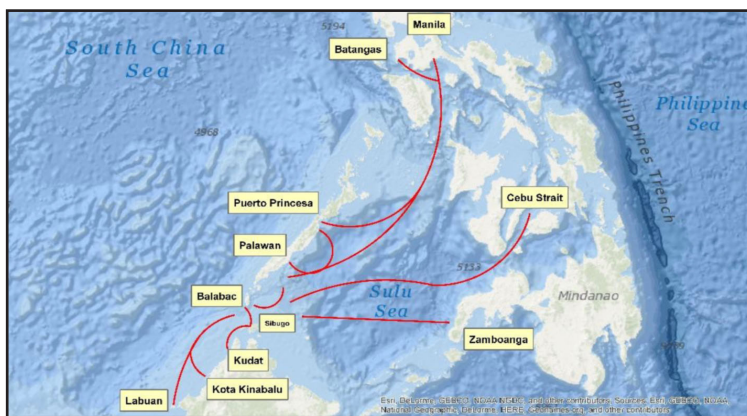
Figure 1: Sulu Route Cluster (Palawan)
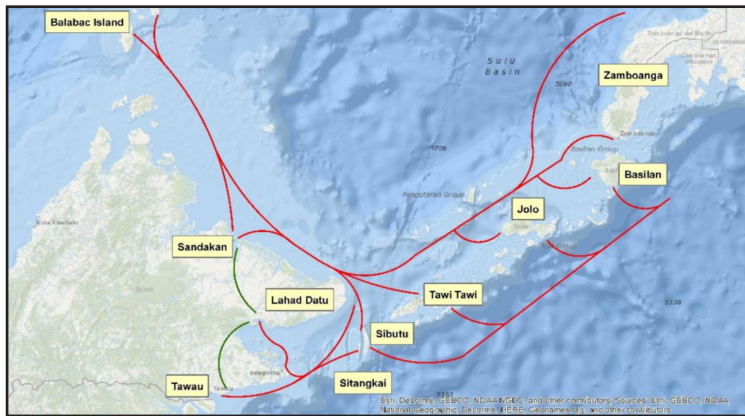
Figure 2: Sulu Route Cluster (Mindanao and Sabah)
Source: Lino Miani. (2015). "The Sulu Arms Market," Figure 4.4 and 4.5.

The main groups involved in the domestic conflict in Mindanao are the MNLF and MILF or between Christians and Muslims in the fight to control domestic economic politics. However, there are also groups which cause crime, insurgence and terror nexus as an effect towards the conflict in Mindanao region. The groups are as follows:

a.   Kiram Group.
b.   Moro National Liberation Front (MNLF).
c.   Moro Islamic Liberation Front (MILF).
d.   Abu Sayyaf Group @ Al-Harakat Al-Islamiyah
e.   Bangsamoro Indipendent FF
f.   Al-Qaeda and Jemaah IsIamiyyah.
g.   Darul Islam
h.   Maute Group @ Daulah Islamiyah Fi-Ranao (DIFR) or IS-RANAO (Islamic State of Lanao.
i.   Rajah Solaiman Revolutionary Movement @ Rajah Solaiman Islamic Movement (RSIM)

ASG is one of the leading actors in KFR's activities in the South Philippines along with 14 other groups.   In addition to ASG, the major KFR groups active on the East Coast of Sabah are the Muktadil Brothers Group, Salip Sosong Group and Halipa Group. The Muktadil Brothers group is known to be on Sitangkai Island and has eight to ten members. Badung Muktadil leads this group. The group used speedboats and weapons such as the M16 and Garand in their abduction operations. The group also has a network of contacts and is assisted by the ASG group.

Around 2003, it was identified that there were six active sea robbers namely the Pipi Uwah Group, Sarikal Group, Akil Jani Group, Tandanan Group, Madjuran Group and Akil Dewan Group which made the southern Philippines their home base. However, around 2010, some of the major groups that often engaged in piracy were identified as the Sarip Tulang Group, the Timbul Jari Group and several other small groups.

ARMED GROUPS COOPERATION NETWORK – TRANSNATIONAL TERRORIST AND CRIMINAL GROUPS

In Globalization era, complex networks of insurgent groups, terrorists and criminal organizations were crucial to maintaining their existence despite the different goals and ideologies of these groups. Criminal activities in the Southern Philippines such as trafficking of SALW, humans, drugs and commodities, blackmail, homicide and KFR are the modes of operations in

maintaining their existence. Insurgent groups and terrorists continue to develop their networks with criminal groups to obtain resources to fund their activities. This was evidenced by Charles "Ken" Comer who saw that the route of smuggling and terrorism was cross-border through the "back door" of the Southern Philippines connecting Indonesia and Malaysia. The Terrorist Transit Triangle (T3) based on the Sulawesi Sea/Celebes depicts at least four routes identified as figure 3.1. The same routes and pattern were verified by Joint Task Force 2 HQ in Tawau as per Appendix A. As such, this chapter's primary focus is to unravel and analyse the extent of the nexus of relations between insurgent groups, terrorists and criminal organizations in the Southern Philippines.
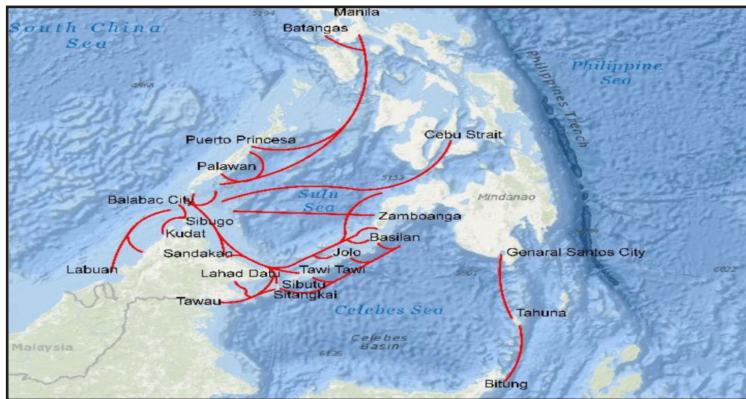
Figure 3.1: Terorist Transit Triangle (T3)
Source: Charles "Ken" Comer, (2010).

Generally, MNLF has networked with international militant groups because they receive financial funding and weapons through Libya and Al-Qaeda. Apart from that, MNLF also has members who were veterans of the Afghanistan War or "Afghanistan Alumni". Although the appearance of MNLF was nationalistic, the relations they had with foreign militants is vital in order to attain funders of their cause. Although not proven that MNLF has direct connections with the ASG and MILF, most MNLF members have family relations with those militants. Factors such as sharing similar ethnicity, sects, religion and cultures cause them to help one another in fighting the enemy even though there are disagreements among them. McKenna argues that there are disgruntled MILF fighters who join the ASG; therefore he opines that there is a possibility that ASG seen as a better platform compared to the MILF and MNLF who able to challenge this group.

Generally MILF's weapons come from Cambodia, Thailand, China, Afghanistan, Pakistan, Saudi Arabia, Palestine, Lebanon, Sudan, Libya, North Korea to Sabah, which transits in Indonesia, Singapore, Taiwan, Myanmar, Vietnam and Hong Kong. The monopoly of the MILF control towards the waters and coasts of that region has allowed the MILF to conduct illicit arms trading on a vast scale. In 1999 alone, ten shipments were reported to embark through the coasts of Sabah. MILF also saw those weakness of control and enforcement in the Sabah borders as the opportunity to smuggle weapons, fighters and machines. Most of these supplies were sent to the recipient through the Tri-Border Area (TBA) (i.e. Indonesia, Malaysia and the Philippines) are also known as the back door of the Philippines.

In January 1993, JI then had shifted their training centre from Afghanistan to Mindanao because of cheaper costs and nearer distances. At that moment, several JI leaders including Abdullah Sungkar Zulkarnaen (Chief of Operation for JI) have close relationships with Salamat Hashim since their meeting in Pakistan around 1984. After that, Southern Philippines became a relevant passage or the back door for JI as a logistical base and refuge from Indonesian authorities. The cooperation network between MILF and JI can be seen clearly through ventures in training new guerrilla warfare capabilities and subsequently expand the influence of JI in Southern Philippines in the Asian region though agreements between the chairman of MILF Hashim Salamat and

JI in preparing training camps to recruit JI members in Maguindanao and a military academy which is also located in the same camp in 1998. In the same time, MILF then produced a safe haven and prepared the militants, especially those from South East Asian countries through their training camps. In these training, JI has played an essential role in establishing MILF Special Operations Force to conduct asymmetric warfare and non-conventional ones such as sabotage. In return, Hashim Salamat permitted JI to establish Wakalah Hudaibiyah or Hudaibiyah Camp in the premises of Abu Bakar Camp Complex as training centre,

ASG has received support and help directly from Iraq and Iran and gain the support from Hamas, JI, LTTE, Harakat ul-Muhejidin (HuM), KMM, Palestinian militant group, Egypt, Chechnya and several separatist groups in Thailand, Islamic Movement of Uzbekistan (IMU), Armed Islamic Group (GIA), Islamic Army of Aden and 14K Triad, Hong Kong. Besides that, there are reports that state that ASG also receives help from the International Islamic Relief Organisation (IIRO). Although ASG claimed to fight for Islamic states in Mindanao, most of their activities are seen to be more inclined towards criminal activities that were financially motivated compared to fighting based on its ideology. Apart from conducting kidnappings for ransom (KFR), ASG also conducts blackmailing activities, which is considered as taxes. The ability of ASG to launch planned attacks and is capable to of moving freely has attracted the sponsors and donors to fund their fight. In the year 2000, it was estimated that the value of their arsenal is worth US\$ 2 million and roughly their allocation was US\$ 5,000 for each ASG fighter that is equivalent to most elite forces in the world.

In 1995, ASG was clearly involved in the Bojinka Operation, the operation with multiple plots in conducting assassination attempts on Pope and American President, US embassy bombing in Manila and Bangkok and the sabotage of US Airlines across Asia. Ramzi Yousef, was the mastermind of the World Trade Center New York attack in 1993. Although that plan did not materialise, it still is proven that ASG still has an operational network and logistics with international militants. Documents confiscated in a police raid in January 1995 has verified that ASG also has linked with Mohamed Jamal Khalifa, in coordinate militant activities in Israel, Egypt, Pakistan and United States, Abu Nidal Organisation (ANO), Hezbollah, Hamas and Abu Nidal Fateh Revolutionary Council. ASGs network in South East Asia was proven when ASG had relations with Al-Arqam group in Malaysia and separatists in Pattani, Yala and Narathiwat, Southern Thailand. Based on the information from former members of ASG Edwin Angeles, a training camp has existed in Sabah and operates using funding from Syria. The Filipino authorities then suspect that Vietnam is the most significant transit point for weapons from Thailand, which flowed, to the separatists and militants in Southern Philippines such as MILF and ASG.

In the Southern Philippines, all the kidnappers involved in the KFR incident are believed to have ties to criminal groups and ASG. This has led ESSCOM-based security authorities to be on high alert to ensure the highest level of security. Although the number of abductions in the ESSZONE area is alarming, the establishment of ESSCOM has at least frustrated nine KFR trials in the area from July 2014 to October 2015 with no KFR incidents in 2017. However, the security threat in Sabah is not limited to the KFR or militant groups. Other threats are also from organized crime groups carrying out criminal activities such as the Sabah, Philippines and Indonesia borders. Criminal cases such as smuggling have reportedly occurred along the Sabah waterfront concerning to smuggling of firearms, humans, drugs, cigarettes, diesel oil and consumer goods. Militant groups also took advantage of this organized crime group to help smuggle militants, explosives and firearms from Indonesia into the Philippines through Sabah and vice-versa. In this case, a former JI member Ali Fauzi revealed how he and several other JI members smuggled between 10 and 15 M16 rifles from the Philippines to Indonesia via Sabah using fishing boats and tankers during an interview with Al-Jazeera in 2013. He also disclosed information on several senior JI members who were also involved in the Bali bombing using Sabah waters from Indonesia to the Philippines

as a strategy to prevent detection by Indonesian authorities following the 2002 terrorist incident. Terrorist activities, KFRs and organized crime groups along the east coast of Sabah intertwined in the same theatre of operation. Criminals were also funding other illegal activities such as KFR and arms trafficking. The encounter between militant and organized crime clearly seen in the Muktadir Brothers Group case. Apart from being a strong supporter of ASG, the group is also actively involved in abduction activities related to ASG. Thus, Malaysia needs to be addressed holistically and comprehensively the threats from the nexus of militant, KFR and organized crime issues. Criminal activity stems from SALW trafficking and the emergence of armed groups seen as a catalyst for current security threats, especially in the East Coast of Sabah.

Between 2000 and 2001, ASG is estimated to have abducted about 140 hostages including students, priests, teachers, and foreign tourists while 16 of them have killed. However, in 2004, most abduction activities were halted as KFR groups along with members of the Indonesian-based militant organization, the JI group again engaged in terrorist activities including the Superferry 14 bombing incident on 27 February 2004 at the Manila port that killed 116 people. Between 2004 and 2007, several kidnappings culminated in the hostage massacre including the sacking of six US-funded road project workers in Jolo. Although new fighters reinforced ASG when the MNLF members under Habier Malik joined ASG in March 2007 and started to conduct KFR activities in the middle of 2007. In 2008 it saw more than 55 individuals were kidnapped mostly after the ransom had been paid. However, the abduction rate dropped to about 40 in 2009. The majority of the abductions were concentrated around and islands near the Sulu Islands in the Southeast Philippines, such as Lankayan, Mabul, Pom Pom, Kapalai, Ligitan, Mataking and Sipadan. ESSCOM Investigation Director said there were 14 KFR groups from the southern Philippines and at least four of them had abducted in the east coast of Sabah. Generally, ASG is reported to to provide fund to buy petrol from smugglers and lending weapons, ammunition and boats to KFR groups. ASG also provided skilled personnel with water at ESSZONE to participate in the abduction operation and to serve as intermediaries to bring hostages to the Sulu Islands or to facilitate their release. Due to the chronology of tourist abductions in Sabah, the Malaysian tourism sector has been severely affected due to significant decline in tourists after the event. The Malaysian government has taken several steps to mitigate the huge losses caused by the abduction incident in Sabah and to launch tourism campaigns in foreign countries.

Terrorists, guerrillas, separatists and militants are just like any other criminal organization. Terrorism and guerrillas have changed their operations after the Cold War with the latest technology as well as SALW supply facilities after 1989. Besides, there has been public support for the political motivation of post-war declines. Insurgents and terrorists are involved in criminal activities to sponsor their operations in Southeast Asia. Among the three groups that are politically motivated and believed to be actively involved in the sea robbery are the MILF, ASG and GAM. 76 cases reported since 2002 related to sea robbery in Sabah Waters. While guerrilla warfare for political purposes is a pattern of the MILF's armed struggle, members of the group have also been charged with kidnapping, blackmailing and piracy. For example, in 2003, the MILF was responsible for 16 of the 155 attacks or attempted robbery recorded in the South of the Philippines. At the time, 17 pirates were operating in our country and, six of them had links with MILF members. ASG members are also responsible for piracy attacks in southern Philippine waters. While the group's overall goals are political, ASG is also associated with such criminal activities. For example, the group linked to the August 2003 hijacking of a trawler, in which a special force of the Philippines claimed they had identified the perpetrator of the incident two days after the attack. The clashes between government forces and ASG members have resulted in four deaths.

THE IMPLICATION TOWARDS MALAYSIA (SABAH) SECURITY

The implications of the emergence of armed groups in chapter 1 and the nexus between crime, insurgents and terror in South Philippines in chapter 2 intertwined with each other in efforts

to study and analyze issues on Malaysia security especially on the East Coast of Sabah. Therefore, several local issues identified interconnection with the nexus between crimes, insurgency and terror in South Philippines will be described in this chapter. Among the effects produced from the appearance of armed groups and militants in Southern the Philippines is the influx of immigrants since the 1990s, which became a security issue in Sabah. From one aspect, the presence of Filipino immigrants is not a new phenomenon because they have been involved in barter trade and were present in Sabah for a few centuries. Several pushing and pulling factors influence the mass influx of illegal immigrants. The Southern Philippines political instability is a pushing factor; meanwhile, the prosperity of the economic situation in Malaysia is a pulling factor causing immigrants from that country to choose to come to Malaysia due to employment opportunities. It is also because of Malaysia requiring cheap labor in the service, farming and construction sector compared to their original countries. Therefore, apart from the allure of Sabah's economy, the geographical factor between Sabah and the Philippines gave a conducive environment to ease the movements between these countries. For example, the journey between the Sulu islands (Simunul Island and Sibutu) takes only 45 minutes. Besides that, their presence is also caused by the similarities from social, ethnic, cultural and language elements, and there are also close family relations and social relationships between Southern Philippines and Sabah. These factors make it tough for the authorities to identify between immigrants and locals. The lackadaisical attitude of authorities in Sabah and corruption also hardens the control towards illegal immigrants.

Malaysia would like to see permanent peace in Southern Philippines due to several factors, especially regarding problems arising from Filipino immigrants in Malaysia, especially in Sabah. The influx of immigrants has increased social problems as well as increased crime rates, squatter issues and operations to arrest and expel illegal immigrants. For the Philippines, the movement of their citizens is not an issue, but for Malaysia, it is a severe security issue where Malaysia has to be responsible for the political, social and security problems that occur. Sabah also faces a high criminal percentage conducted by immigrants, especially in urban areas, which are the concentration of immigrants like Kota Kinabalu, Tawau, Sandakan and Keningau. The crimes committed include robberies, kidnappings, murders, smuggling and drug trafficking, especially Syabu. According to 2015 statistics, 58 per cent out of 6,500 prisoners and convicts undergoing punishment for various offences throughout Sabah are foreigners in which 78 per cent are Filipino. The overspill of immigrants in Sabah has indirectly encouraged the spread of documents forging syndicates, especially identification cards to attain benefits such as medical, education, housing and others.

This issue once again became a hot topic during the Lahad Datu intrusion in 2013 and kidnappings after the incident in Sabah's East Coast. Sabah security issues are severe due to the overspill of immigrants because they are also involved in crime such as kidnappings and smuggling. It was reported that a part of organized crime such as KFR groups and smugglers are done by immigrants, while several of these people have family ties with locals which in turn gave them information to plan and conduct KFR. This issue is evident when authorities discovered a series of KFR incidents in ESSZONE in 2013 overshadowed by immigrants working in the hotel or fishing sector. They provide the location information for each target.   Apart from that, the implications of the conflict in Southern Philippines has given a more significant threat towards Malaysia's security with the presence of militant groups and terrorists. Based on Indonesian intelligence claim that the most wanted individuals such as Nordin Top and Azahari roam freely of Kalimantan, Sabah and Southern Philippines. Through Hambali's arrest, many information was attained by the authorities. Hambali is one of the leaders of JI who exposes that since 2003, more than US$ 27,000 was transferred to MILF. It is even more alarming when some JI members open an account at a Malaysian bank to raise funds for Sabah-based MILF operators. This finding is based on information obtained during an investigation into DI members arrested in Sabah who intend to establish an Islamic state in the region. Finally, any RMP Terrorist Branch disclosing the existence of JI and DI movements in Sabah was rediscovered in 2015. JI's activities in Sabah were evident

during the interrogation of Nasir Abbas, the leader of Mantiqi III, which encompasses Brunei, Sabah, Southern Philippines, Sulawesi and Kalimantan, Indonesia. Intelligence sources have also confirmed that Nasir's involvement proves that Sabah is vulnerable to terrorism.

The main issue in Sabah's East Coast is non-traditional threats occurring from non-states actors due to the effects of the Southern Philippines conflict. Therefore, kidnapping cases and robberies occur frequently in East Coast Sabah because of the emergence of armed groups stated in the earlier in this chapter. Robberies and KFR are not a new issue in Sabah, and these incidents have been happening long before Sabah was still under British rule. For example the armed robbery in Lahad Datu in 1984 and Semporna in 1996 where an armed group who is believed to be pirates from Southern Philippines have attacked police stations and military outposts which causes injuries and casualties of locals. The other reasons for instability in the Philippines are the cross border crimes, smuggling, kidnapping and intrusion incidents as occurred in Lahad Datu in 2013.

If looking at the statistics of KFR incidents, it is proven that since the year 2000, there are more or less than ten kidnapping incidents involving ASG or other groups known as KFR groups in Sabah which involve ransom reaching millions of ringgits. In the year 2000, two more serious incidents occur in Sabah where ASG kidnaps a foreign tourist on Sipadan Island and Pandanan. The first incident occurred on April 23, 2000, in Sipadan Island and second incident occurred on Pandanan Island on September 11 that same year. This incident continues to occur in October 2003 at Borneo Paradise Eco Resort Farm, Lahad Datu, where the same group kidnapped five resort workers. The Similarity to the incident of Sipadan and Pandanan Island, the group claimed ransom for the release of their hostages and all the hostages were finally released after a shipping company based in Miri paid the ransom. Abduction statistics collected throughout the study are as follows:

NO	YEAR	SABAH	SOUTHERN PHILIPPINES
1	1979	1	-
2	2000	2	-
3	2003	1	-
4	2004	1	-
5	2007	-	2
6	2008	-	1
7	2009	-	2
8	2010	3	-
9	2011	1	2
10	2012	1	1
11	2013	2	2
12	2014	4	-
13	2015	1	-
14	2016	8	5
15	2017	-	4
16	2018	3	-
Total		28	19

Table 4.1: Statistics of Abduction Incidents in Sabah and Southern Philippines Waters
Source: Joint Task Force 2 HQ, Tawau, Sabah

As mentioned before, several illegal immigrants believed to have connections and become the mastermind to criminal activities in Sabah, including smuggling and KFR. A survey conducted by ESSCOM in 2014 in the water villages also proves the same findings when non-citizens occupy 58 per cent of the houses; meanwhile, 244 houses were abandoned, and illegal immigrants most probably inhabit unable to be surveyed. Therefore, water villages on the shores of eastern Sabah have become as safe havens to most illegal immigrants and functions as safe houses for criminal activities. These water villages are also famous as safe havens for smuggled items such as firearms and miscellaneous items before they are kept and sold in Sabah. Water villages also serve as a hub to KFR activities, intrusion and terrorism and also hub of outlaw activities by illegal immigrants. This hub happens because there is a lack of monitoring an access to most illegal jetties alongside them. This allegation was proven when authorities expose that the Kiram group hide in water villages during the intrusion incident in Lahad Datu in 2013.

Handling the problem of water villages is not enough to eradicate smuggling, KFR and terrorist activities. The Sabah East Coast also faces illegal immigrant issues such as non-citizen Sea Dayaks, Pala'u or Sea Bajaus. They have no documents and possess no citizenship due to living like nomads at sea. Sea Dayaks lived approximately off Kunak, Semporna, Sandakan and Lahad Datu waters and they are around 5000-7000 people. Since they are expert divers and seamen, not exposed to education and live below the poverty line, makes them an easy target be exploited by criminals and smugglers. They can be used as eyes and ears as well as informants to criminal groups, providing sanctuary to facilitate the smuggling of arms, items and humans as well as other criminal activities. In 2015, ESSCOM's commander, Datuk Abdul Rashid Harun, once reminded the Sea Dayak community not to be involved in criminal activities. He also confirmed that there are Sea Dayaks who become the henchmen of the enemy to monitor the movements of security forces, especially in islands around the waters of Semporna. Henceforth, several Sea Dayaks were also involved in the criminal activity network, which gives negative implications towards Sabah's security.

One challenge faced by Sabah is the effect of barter trading between Sabah and the southern Philippines. Barter trade between Sabah and neighbouring countries such as Brunei, Indonesia and the Philippines existed before the arrival of British and Spanish colonizers to North Borneo and the Philippines. Barter trading is also a legal activity according to the law and is still practised until today and focuses on areas such as Tawau and Sandakan. Although Malaysia acknowledges the economic opportunity of barter trading which can bring in foreign currency, the Philippines, however, sees it as smuggling activities. The Malaysian authorities also verify that barter trading is legal, therefore making it hard to conduct enforcement to stifle terrorist activities, including smuggling and KFR. Crime can be committed by using barter routes to Sabah masked as legal activities. Contrabands are smuggled in and out through barter trade routes include illegal immigrants, drugs, weapons, cigarettes, alcohol, petrol, sugar and other subsidized items using boats known as Kumpit. The intrusion of Kiram group in the 2013 Lahad Datu incident was reported to enter Lahad Datu, Sabah gradually using barter trading routes. The RMP also confirmed that among the modes of kidnapping, operatives were to enter Sandakan pretending to be barter traders to avoid being detected by authorities in the Sandakan kidnapping incident in May 2015.

CONCLUSION

East Malaysia, especially on the East Coast of Sabah, has excellent potential in terms of growth and socio-economic development based on two main elements; geo-strategic and geo-political factors. In terms of geo-strategic aspects, these waters are a hub for international cross-border links connecting the Sulu Sea with the South China Sea, the Sulawesi Sea and the Pacific Ocean. The tourism sector, mostly concentrated in these waters, is one of the significant contributors to Sabah's economic growth. This condition is because these waters naturally provide a natural landscape and panoramas that attract both domestic and foreign tourists to the East Coast of Sabah. These maritime value elements are capable of providing long-term space that promotes Sabah's socio-economic activities in particular and Malaysia in general. On the geo-political aspect, the east coast of Sabah is also easily accessible by neighbouring countries of the Philippines and Indonesia which can add value to eco-tourism-oriented activities and other activities such as fisheries, trade and shipping.

However, Sabah's East Coast also faces security threats due to geo-strategic and geo-political factors resulting from these advantages. Since 1970, when Marcos declared an emergency, any security development in the Southern Philippines had implications for Malaysia (Sabah). Political unrest and movements of separatists, terrorists and criminal groups based in the Mindanao and nearby islands could have direct implications for Sabah, especially in the Sulu and Sulawesi waters. The wide maritime borders in Borneo waters which have thousands of small islands (some of them uninhabited) and the distance of these maritime borders which are close between Malaysia and Philippines for only a few nautical miles cause Malaysia to face security issues which will occur from the existence of armed elements in the Southern Philippines. Geographical conditions surrounded by small islands produce a conducive environment for criminal, insurgent and militants groups have used the opportunity in Eastern Sabah as a transit to conduct illegal activities including arms smuggling, humans and drug trafficking which are hard to be detected by the Philippines, Malaysia and Indonesia. It, directly and indirectly, disrupts the survival of the local community, impeding economic growth and local and national political stability.

The availability of SALW supplies can be interpreted with the emergence of armed groups in the Southern Philippines, which have rebelled against the government to achieve the Bangsamoro aspirations. In addition to enhancing combat capabilities against the Philippine government, the SALW trade in the Sulu Sea also has an impact on increasing the operational capabilities of militant groups and cross-border organised crime that have regional and global linkages. Thus, the emergence of the armed groups involved in this study has shown that there is an interconnection of crime, insurgence and terror in the area of study that these elements of security threat ultimately have implications for Malaysia especially on the east coast of Sabah.

Further, because of the interconnection of crime, insurgence and terror in the study area, these groups have finally been found to have links with immigrants who are also involved in criminal activities, insurgents and militants that focused Sabah in East Malaysia. Consequently, these security threats have implications for Malaysia, especially on the East Coast of Sabah, with the emergence of armed groups in the southern Philippines, as catalysts for crime activities such as the KFR, sea robbery and smuggling that these criminal groups have links to separatist and militant groups in the southern Philippines. As a result, the ongoing conflict in southern Philippines has

led to Sabah's security implications, especially in the issue of dumping of Filipinos immigrants, which are the catalysts for rising crime rates such as kidnapping, robbery and smuggling in Sabah. Because of these incidents, Malaysia has decided to move security personnel on a larger scale and apparent operations compared to previous operations in this area to protect its geo-strategic and geo-political interests.

The impact of crime, insurgence, and terror link in the Southern Philippines is significant to the immigrant issue in the East Coast of Sabah. It was initially a social security issue, and it had an indirect impact on national sovereignty. However, the presence of large numbers of immigrants has implications for the demography of the population in the area, education, crime rates, immoral social activities, religious beliefs and teachings as well as the movements of subversive and militant groups.

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AUKUS - THE LATEST GEOPOLITICS OF INDO-PACIFIC
AND ITS IMPACT TO MALAYSIA

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ABSTRACT

America's pivot to Asia has grown to be seen as a global phenomenon since President Barack Obama took office. Its new foreign policy was created to protect American interests in maintaining global hegemony while deterring China's influence and power from expanding. To assist Australia to develop its first nuclear-powered submarine, AUKUS was established by the US and its two closest allies as part of its Indo-Pacific Strategy. This circumstance has led to various speculations among nations in the Indo-Pacific, including China, France and ASEAN member state countries. With the growing geopolitical tension in the Indo-Pacific between major powers, Malaysia could not afford to fall behind in sustaining its relevance and significance to safeguard its national interest and protecting its sovereignty. Therefore, this paper will examine and analyze how AUKUS has affected Malaysia and its regional security in four main areas, including geopolitics, the economy, security and technology.

Keywords: *AUKUS, Indo-Pacific, South China Sea*

INTRODUCTION

The term Indo-Pacific has recently replaced the more traditional Asia-Pacific phrase in the geostrategic discourse. The term was first used by the US during Barack Obama's administration in 2011. "US Pivot to Asia" is the US shifted foreign policy from putting the focus on the Middle East to Asia. The US has adopted the "Indo-Pacific Strategy" to execute this policy. This strategy was a response to the systemic shifts in the world order driven by China's emergence. The US perceives China to be their greatest threat. The Chinese threat is reflected in its remarkable growth. It is currently the top trade and economic power, with about 15% of the total market share, the second-largest navy and publicly declared to become the world's new hegemony power by 2049. Therefore, the "Indo-Pacific Strategy" is mostly seen as a US-led containment strategy dedicated towards China (Heiduk & Sulejmanovic, 2021). This strategy's objective is to add Asia to the heart of American policy, which is portrayed by the US's growing military, economic and diplomatic commitment to the region.

However, the 'Indo-Pacific' term had been misunderstood with 'Asia Pacific'. The phrase 'Asia-Pacific' refers to the part of Asia that is situated in the Pacific Ocean and is made up of Northeast Asia, Southeast Asia, and Oceania. It is more of an economic vision than a security-related notion, and India is not a member of the region. On contrary, the nomenclature Indo-Pacific does not refer to geographical location, but rather about the concepts of geopolitics. It is an integrated theatre that combines the Indian Ocean and the Pacific Ocean, and the land masses that surround them. Its area of interest is unknown, however, it is said to extend from the coast of East Africa, across the Indian Ocean, and into the Western Pacific, incorporating countries such as India. It is both a strategic as well as an economic domain comprising important sea lines of communication that link the littorals of the two oceans. The Indo-Pacific is often associated with maritime security and cooperation since it is predominantly a maritime region. The area of Indo-Pacific can be illustrated in **Figure 1**.

Figure 1: Indo-Pacific Region (Source: International Asia Today, 2021)

The uniqueness of the Indo-Pacific region has drawn attention to a wave of different debates and controversies in the field of geopolitics. Since the formation of the Quadrilateral Alliance in 2017, which included the US, Japan, Australia and India, there has recently been an upsurge in the formation of a new security pact alliance known as AUKUS. AUKUS was signed on 15 September 2021, by the US, the UK and Australia. The formation of AUKUS was announced during a virtual conference amongst the country's three top leaders. The main goal of the AUSKUS formation is none other than to assert and counter China's growing hegemony in the Indo-Pacific region. Under the pact, the US and the UK will help Australia to acquire nuclear-powered submarines besides supplying infrastructure relating to nuclear submarine technology development, construction, and maintenance. The nuclear-power submarines are regarded as more powerful than conventional submarines because they operate more silently and can stay for a longer periods in the ocean. They are almost undetectable since they do not emit exhaust gases. Apart from assisting Australia to develop its nuclear-power submarine, the tripartite alliance also intends to deepen the three countries' diplomatic, security, and defence cooperation. In other words, it's an enhance partnership between the three countries. AUKUS partnership will concentrate specifically on defence technology and supply chain collaboration, emphasizing cyber capabilities, artificial intelligence, quantum technologies, and new undersea capabilities (BBC News, 2021).

Figure 2: The declaration of AUKUS by President Joe Biden, former Prime Ministers Scott Morrison and Boris Johnson on 15 September 2021 (source: BBC News, 2021)

Following the establishment of AUKUS, the alliance has unveiled its first mission, which involves the procurement of nuclear submarines for Australia. Previously, Australia had two options either to buy the US Virginia-class submarine or the UK Astute-class submarine. However, former Australian Defence Minister Peter Dutton revealed the classified deal on 9th June 2022, to acquire two Virginia-class submarines from the US by 2030 and develop eight more to increase the fleet's size to ten. Peter Dutton is currently the opposition leader of Australia after his party lost the Australian Elections in May 2022. Nonetheless, Australia is still conducting their study under the scoping phase for its nuclear-powered submarine options. The scoping phase, which is the initial step in the project development process is expected to take 18 months to be completed. It involves knowing about the features of the product that will meet the requirements of the stakeholders.
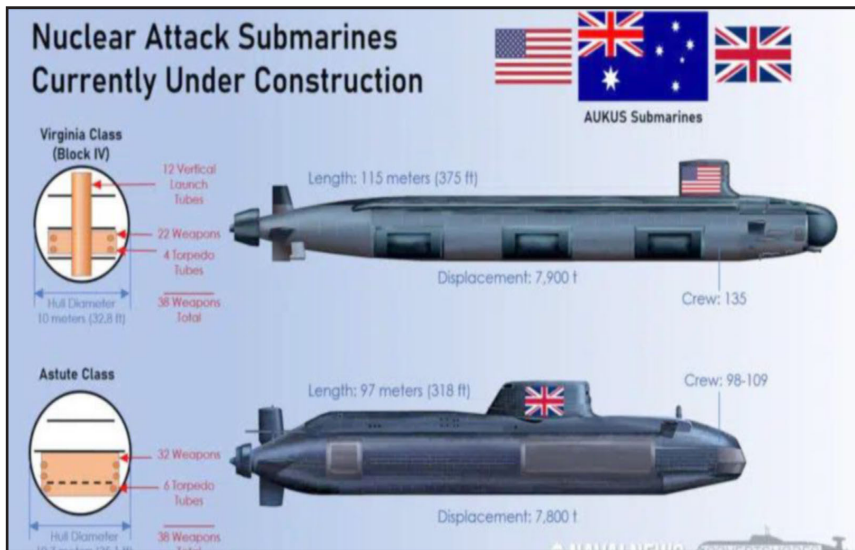
Figure 3: Nuclear-power submarine options to be acquired through AUKUS (source: Sutton, 2021)

The rise of China's hegemony as a global economic and military power has led to an increase in the country's level of aggression, especially in the SCS. This new evidence is the main justification for the US to serve as a pioneer in AUKUS. The notion of a strong, rising China, which most of the Western world sees as a threat to the present global order, drove such change in the strategic doctrine, particularly in the Indo-Pacific region. Each party of this trilateral security pact has their reasons for signing on to the agreement. The UK wanted to secure its position and presence in the Indo-Pacific as a major power following Brexit. As for Washington, following the Afghanistan debacle, needed to reassure its commitment to the Indo-Pacific region and Australia believes that this will help to curb China's growing hegemony.

What is Malaysia stand in the middle of this geopolitical tension? The formation of AUKUS alliance has a significant impact on Malaysia as this country is at the intersection of the Indian and Pacific Oceans. With the growing of geopolitical tension in the Indo-Pacific between major powers, Malaysia could not afford to fall behind in sustaining its relevance and significance in this region to safeguard its national interest and protect its sovereignty. Therefore, this paper will examine and analyze the development of AUKUS and its impact on Malaysia and its regional security.

POLARIZING RELATIONSHIP ON AUKUS

This new trilateral security partnership between Australia, the UK and the US has left some friends and foes fuming. There was a wide range of reactions among nations in the Indo-Pacific. Some of them agree while some do not. China, for example, had sharply criticised the formation of AUKUS. China's Foreign Ministry spokesperson, Zhao Lijian refer to it as a "Cold War zero-sum mentality" and "ideological bias" (Samaan, 2021). Beijing warned that the security pact will jeopardize Indo-Pacific peace and stability. This will also fuel the arms race, which will lead to the use of nuclear weapons in the future. Furthermore, China is concerned that the US may be able to drag its allies into war in the region, escalating more tensions.

France, on the hand, was the most outraged by the formation of AUKUS. In 2016, the Australian government has inked a contract with France to buy twelve conventional diesel-electric Barracuda class submarines. However, due to this security pact, Australia has scrapped its USD 40 billion submarine deal with France in favour of developing quicker and quieter nuclear-powered submarines with its new partners. French President Emmanuel Macron slammed Australia's decision, calling it a stab in the back. Following the cancellation of the French-Australian submarine deal, Macron has also recalled the French Ambassadors to the United States and Australia. However, when the new Australian Prime Minister Anthony Albanese was elected to succeed Scott Morrison in the recent election, he paid France USD 584 million as a fair and reasonable settlement, thereby ending a decade-old multi-billion-dollar submarine deal and the one-year spat between Canberra and Paris (France24, 2022). Furthermore, New Zealand was part of the five-nation Anglosphere with Australia, the US, the UK and Canada (known as the Five Eyes) that was not informed about the AUKUS formation in advance. Although New Zealand did not protest the establishment of AUKUS, Prime Minister Jacinda Ardern warned that the nation would prohibit Australian nuclear submarines from entering its waters due to the country's strong stance on the nuclear weapons-free principle, which was ratified in 1987 (France24, 2022). Meanwhile, she urged the AUKUS coalition to maintain its adherence to the Nuclear Free Blue Pacific Treaty to prevent nuclear conflict in the region.

Other strong US allies in the Indo-Pacific region such as South Korea and Japan have responded positively to the AUKUS coalition. Japan welcomed the creation of the defence alliance and supported the decision of this partnership to develop hypersonic weapons and electronic warfare capabilities (Business Standard, 2022). From New Delhi's perspective, the trilateral coalition signals a strong political resolve in Washington to confront the growing security challenges from Beijing. All US allies believed that this cooperation is one of the ways to confront the rise and aggression of China's influence.

ASEAN DISUNITY OVER AUKUS

ASEAN was established in 1967 by five founding members; Malaysia, Indonesia, Thailand, Singapore, and the Philippines. Later on, Brunei Darussalam, Vietnam, Laos, Myanmar and Cambodia joined ASEAN making it a total of ten member countries to this date. The establishment of ASEAN took place at a time when the world was amidst the Cold War between the western democratic bloc and the Soviet communist bloc. Since the Southeast Asian region was directly involved in the Cold War tension where Vietnam was involved in the Vietnam War with the US, ASEAN underscore the importance of keeping this region free from any form or manner of interference by outside powers. Therefore, ASEAN has adopted a policy known as Zone of Peace, Freedom and Neutrality or ZOPFAN. This policy will also ensure that this region will no longer be a conflict theatre for the major powers to compete for their interests. Apart from ZOPFAN,

ASEAN also ratified the SEANWFZ Treaty, which emphasized the necessity of maintaining the Southeast Asian territory as a nuclear-weapon-free zone which was signed alongside ZOPFAN in 1971. Its principal purpose is to preserve the security of Southeast Asian waters and to prevent a nuclear arms race in the region. Since then, ASEAN has gained international recognition for successfully preserving peace and prosperity in the Southeast Asia region from the interference of major powers. ASEAN also played a significant role in redeveloping its member state economies after being colonized by western powers for so long.

However, since China came into the scene to claim its nine-dash-line territory in SCS, various problems and contradictions have arisen among the ASEAN member countries. The dilemma is aggravated by the fact that the scenario has pushed the US into the Indo-Pacific region to challenge China's emerging influence. When the formation of AUKUS was announced, the response shown by ASEAN countries was found to vary. The Philippines and Vietnam are in the opposite direction where both countries welcome this cooperation effort. Philippine's internal response to AUKUS shows support for the US alliance system within the national security establishment, as well as growing concerns over China's assertive behaviour in the SCS. Duterte's policy to divorce US-Philippines relations was put on the back-burner when AUKUS was established, with his Foreign Minister Teddy Locsin, releasing statements that welcomed the security pact (Department of Foreign Affairs, Republic of the Philippines, 2021).

Singapore's reaction also mirrors the Philippines' support for the deployment of US military forces in the region. Singapore Prime Minister Lee Hsien Loong has stated that it will promote a stable and secure Asia Pacific (Mohan, 2021). On the other hand, Indonesia had expressed its concern about the formation of AUKUS which could potentially spark a nuclear arms race in the region. Indonesia often avoids being pulled into taking sides in the geopolitical tension as it opted for regional stability. This can be seen when both Indonesia and Australia diplomats reiterated their commitment to regional peace, stability and security which is in line with the TAC, a treaty that Australia ratified too (The Star Online, 2021). Thus, due to the divergent viewpoints among ASEAN member states, it will be difficult for ASEAN to manifest the ZOPFAN and SEANWFZ policies to liberate Southeast Asia from any foreign intervention as well as to prevent the outbreak of nuclear war.

MALAYSIA STANCE ON AUKUS

Since Malaysia is located at the maritime junction between the Pacific and Indian Oceans, the geopolitics of AUKUS will have a significant impact on Malaysia. Malaysia could be negatively affected by the wars and destruction of other nations. In this scenario, a proactive and visionary foreign policy is required to protect the country's interests and sovereignty. Aside from that, Malaysia must align itself with ASEAN so that Malaysia's views and opinions are constantly taken into account. Three days after AUKUS was announced on 15 September 2021, Malaysia was among the earliest in the region to voice its concern over the trilateral security pact as the country feared it could spark a nuclear arms race in this region. Malaysia's Prime Minister Datuk Seri Ismail Sabri Yaakob expressed his concern over the partnership during a phone call with the Prime Minister of Australia, Scott Morrison.

"Malaysia's position on the SCS remains consistent. Issues concerning the SCS must be managed in a peaceful and rational manner through dialogue and consultations, utilising appropriate fora and diplomatic channels" (News Straits Times, 2021).

The remark given by Malaysia's Prime Minister demonstrates one of Malaysia's foreign policy pillars, which is to address all conflicts via peace negotiations. Unlike other major power nations, Malaysia chooses to settle all of its disagreements with other nations through negotiations or round tables. Malaysia strongly opposes using force or coercion to settle disputes.

Aside from proposing a peaceful dialogue, Malaysia also reiterated its stance on not being involved in the alliance cooperation (MyMetro, 2021). This is because one of Malaysia's foreign policy objectives is to defend the principle of respecting other countries' independence and sovereignty through a policy of non-interference (Ministry of Foreign Affairs, 2019). This policy of neutrality has long been in place since the era of Tun Abdul Razak's reign. He had raised the idea of Malaysia joining the NAM in 1970.

Additionally, Defence Minister Datuk Seri Hishammuddin Tun Hussein also reaffirmed Malaysia's stance to remain 'neutral' after he met with Australian Special Envoy, Vice Admiral David Johnston and had a telephone conversation with Australian Defence Minister Peter Dutton. Datuk Seri Hishammuddin has issued the following statement:

"Malaysia does not want to be drawn into the geopolitics of the region's major powers. Australia must respect this principle and Malaysia's stance on nuclear-powered submarines operating in Malaysian waters including under the 1982 UNCLOS and the SEANWFZ. If a nuclear-powered warship or submarine enters Malaysian waters, intends or wants to conduct military exercises with Malaysia, special consent from the Malaysian government must first be obtained which it will consider on a case-by-case basis" (Air Times News Network, 2021).

While there have been some reactions from western countries saying that Malaysia is being too dramatic on this issue as this alliance will only assist Australia to develop nuclear-power submarines, not a nuclear-weapon submarine. However, for Malaysia, this nuclear-power submarine project is just the first step toward the next level of nuclear infrastructure. The issue of resistance prevention in the Indo-Pacific will become more complicated if China's nuclear arsenal expands. If China's offensive actions make the security situation in this region worse than what can be worked out, the US is likely to let Australia have nuclear capabilities and weapons. Due to a series of related events, it seems like that it will happen and can put the Indo-Pacific region at risk.

ANALYSIS AND AUKUS IMPACTS ON MALAYSIA

In today's globalized world, states are connected and the world is borderless. Conflicts, wars and economic downturns occurring in one part of the world will immediately affect the other parts of the world. The rivalry between the US allies and China will not only devastate both parties but will also have an impact on other countries in the Indo-Pacific region. Therefore, this section will table out and analyze how AUKUS has affected Malaysia and its regional security in four main areas, including geopolitics, economy, security and technology.

GEO-POLITICAL IMPACT

Due to the variety of opinions among ASEAN member states, it will be hard for Malaysia to set the tone for its foreign policy agenda which is to free the Southeast Asia region from the influence and interference of major powers. AUKUS has also taken away ASEAN's ability to lead the region by dragging its members into a power struggle that ASEAN does not want to be a part of. Besides that, the presence of various western superpowers in the Indo-pacific will certainly aggravate the existing tension following China's claimant over the nine-dash-line. This situation

not only endangers regional peace and stability but will also hamper the stability and prosperity of Southeast Asian nations.

Additionally, Malaysia does not want to play the role of a buffer state in which major rivals use these countries as a battleground to play out their political struggle, as was the case in the political conflicts in Syria and Yemen. This certainly will be a nightmare for all small nations such as Malaysia and other Southeast Asian countries. The consequences of being caught in the middle of a hegemonic struggle during the Cold War era, particularly during the Vietnam War, are still vivid in our minds as we do not want history to repeat again in this modern day.

ECONOMIC IMPACT

The AUKUS alliance is expected to plunge Australia into a more serious trade conflict with China. Canberra's action will certainly invite a backlash from Beijing which could jeopardize Australia's trade relations and economic development as the value of trade between Australia-China is four times higher than the value of Australia-US trade (Mao, 2020). If the Chinese Government takes measures to limit its export and import products, Australia's global market system is likely to be hurt badly and could cause a serious economic downturn in the country. Australia is also believed to have a hard time finding a new trading partner as it has a poor record for cancelling the USD 40 billion submarine deal with France.

In 2000, only four ASEAN countries, namely Cambodia, Laos, Vietnam and Myanmar, relied heavily on China as their export market. Today, all ten ASEAN countries rely heavily on China as its import and export market due to the ASEAN Plus Three cooperation. In 2021, China remained Malaysia's largest trading partner for 13 consecutive years with 18.9 percent share of total trade, expanding by 27 percent to RM421.07 billion compared to 2020. Total exports account for RM192.05 billion, while total imports account for RM229.02 billion (MITI, 2022). In comparison with the US, US is Malaysia's third-largest trading partner with a total trade of RM217.1 billion in 2021 and constituting 9.7 percent of total trade. Total exports to the US account for RM142.24 billion while the total imports account for RM74.87 billion (MITI, 2022). Although Malaysia generates a trade surplus with the US, Malaysia's overall trade balance is still intact. It would be unrealistic for any exporting nation to expect across-the-board positive trade balances with all its importing partners.
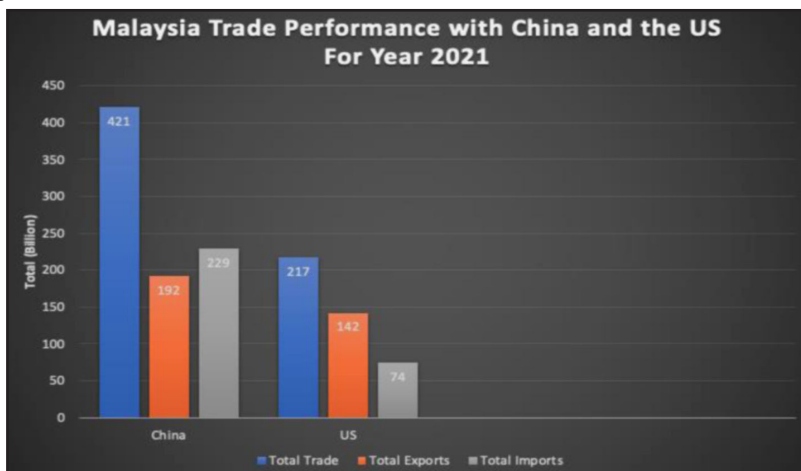
Figure 4: Malaysia trade performance with China and the US for year 2021 (source: MITI, 2022)

Due to both China's and US economic importance, Malaysia does not want to choose side either the US or China. The effects of Russia-Ukraine conflict have resulted in an increase in inflation and the depreciation of the Malaysian Ringgit due to Malaysia's economic dependency on the US, let alone if China imposes trade restrictions on Malaysia. Malaysia will incur significant losses, and the country's economy will collapse.

Nonetheless, this dilemma would not have occurred if Washington was the dominant power for both military and economy. It will be more successful if the US and its allies regain their status as the main economic power with a robust economy. When the country's economic reliance is whittled down, it will have more autonomy to defend its sovereignty. In other words, economic balancing is more important than military balancing. Military balancing is meaningless without economic balancing.

SECURITY IMPACT

Besides assisting Australia with its first nuclear-power submarine, AUKUS will be used as a 'valid excuse' for the US to expand its military influence and installations in Australia and other ally countries in the Indo-Pacific region. At least seven US military bases are now stationed in Australia (Vine, 2021). Included among these facilities are the US Marine Corps outpost in Darwin and the US Navy submarine base at HMAS STIRLING in Perth. Besides Australia, the US had successfully stationed its military installations in Afghanistan, Thailand, Singapore, South Korea, Japan, and the island of Guam as illustrated in Figure 3.

Figure 5: US military bases in the Indo-Pacific (source: Bhaya, 2021)

Furthermore, the AUKUS alliance is seen as an 'instrument' for Washington to materialize its Indo-Pacific Strategy. It is very likely that there will be more alliances likewise in the future to strengthen US positions in the Indo-Pacific region further as well as to realize its dream of overthrowing China from becoming the new world hegemony. On top of that, by combining AUKUS and the Quad, it will also strengthen the US political agenda in this region. Therefore, the formation of AUKUS will increase the presence of more foreign military footprints in the Indo-Pacific region.

Following the establishment of AUKUS, Australia will be the seventh country to own a nuclear submarine after the US, UK, France, Russia, China and India. The deployment of the

AUKUS nuclear submarine in the SCS contradicts ASEAN's ambitions, which are based on the SEANWFZ principles. These nuclear submarines are expected to cross the Malaysian EEZ in the future without any notice or authorization from the Malaysian government. It is also believed that nuclear catastrophes would occur in the SCS, similar to the incident with the US Seawolf-class Nuclear Submarine (USS CONNECTICUT) which collided with an unknown object on 2 October 2021 in SCS (Pickrell, 2021). Therefore, the formation of AUKUS will threaten the ZOPFAN And SEANWFZ region.

Despite the fact that the Western superpowers have adopted the FONOP in the SCS by conducting various military exercises and maritime operations with its allies, Beijing maintains steadfast in its principle of claiming the nine-dash-line territory by conducting more assertive activities in SCS. The establishment of the AUKUS alliance would certainly boost China's assertiveness, and Malaysia will be one of the victims of the country's provocations. The closest example can be seen when the Chinese PLA Air Force intrude Malaysian airspace in Kota Kinabalu on 31 May 2021 (RMAF, 2021). The aggression has shocked the people of this country and got various reactions from the international community. Aside from that, Chinese naval ships such as the Zhaoduan-class 5305, Haiyang Dizhi 8 and CCG ships often interrupt Petronas West Capella exploration activity in 2019 and 2020 (Abadi, 2020). Malaysia obviously does not want China to become more assertive in SCS. Besides Malaysia, Taiwan is also one of the victim of China's provocation activity through the PLA military drills near the China - Taiwan border and PLA military aircraft intrusion in Taiwan's airspace. As on October 2021, there were 149 times of air intrusion by the Chinese PLA jet fighter above Taiwan's ADIZ (DW, 2021). Who else will be affected if not Malaysia and other small nations in the region.

TECHNOLOGICAL IMPACT

According to the Stockholm International Peace Research Institute (SIPRI), US and Russia continue to be the world's two greatest nuclear powers, with 3,708 and 4,477 nuclear weapons respectively, while China has 350, France has 290 and Britain has 180 (Chen, 2022). However, China's warhead count has climbed in recent years, up from 145 in 2006. Over the following decade, the stockpile is expected to double in size. This pattern shows that China is in the process of significantly expanding its nuclear arsenal. When a country or a military alliance poses a threat to another country using nuclear weapons, of course, it will raise geopolitical and military tensions, encouraging the opponent country to increase their nuclear arsenal as well. As a Chinese ally, North Korea also has a nuclear warhead, and the continuation of race and the development of nuclear weapons in this region would undoubtedly have a security impact on Malaysia and other neighbouring countries. Therefore, the establishment of AUKUS will indeed further encourage the proliferation of nuclear arsenal in this region.

The presence of AUKUS is expected to encourage countries in the Indo-Pacific region to increase their military procurement and promoting arms race. China, India, and North Korea are a few of the countries that intended to increase the power of their military forces because of the current situation (Chen, 2022). However, the arms race would not be limited to nuclear submarines or weapons. This dynamic would be broader in scope, extending into other domains of conventional weapons. Non-superpower nations, for example, may not obtain symmetrical capabilities like nuclear submarines. They would have to depend on asymmetrical methods, such as surface ships designed for such tasks, maritime patrol and reconnaissance aircraft, and seabed hydrophone sensors in order to keep up with the pace. As a result, the geopolitical tensions in the Indo-Pacific will encourage arms races among the countries involved, whether small or major countries.

CONCLUSION

The US Middle East policy in the past had devastated the Arab region, causing wars, the growth of terrorism and the power struggle for energy security. Following the US implementation of its "Pivot to Asia" foreign policy, we do not want the same thing to happen in the Indo-Pacific region. Therefore, Malaysia and ASEAN must continue to maintain their principle of neutrality. If Malaysia is neutral in this matter, Malaysia could gain advantages from both blocs compared to choosing a side. As a small country, Malaysia could not afford to lose its economic interest from China as well as its security interest from the US to counterbalance China's assertiveness in SCS.

In conclusion, the formation of AUKUS alliance has a significant impact on Malaysia and its regional security as it will further exacerbate the existence of geopolitical tensions in the Indo-Pacific region and severe the economic dependency. Therefore, Malaysia needs to play a significant role to reunite all ASEAN countries so that ASEAN remain neutral on this matter. ASEAN needs to play its role to become a buffer zone to prevent the conflict from becoming more serious between the two. The world already had enough suffering from severe economic inflation as the result of the Ukraine-Russia conflict. Instead of forming new alliances and coalitions and ramping up the arms race in the post-pandemic world, it would be more appropriate and productive to address issues outside of the military sphere, such as mitigating the effects of the COVID-19 pandemic, reversing climate change and solving the looming food crisis.

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THE INCREASING DEVELOPMENT OF UNITED STATES – CHINA CYBERSPACE IN 21ST CENTURY: IMPACT ON NATIONAL AND REGIONAL SECURITY

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ABSTRACT

As the United States and China's interests in cyberspace develop, the tendency of overlaps and dependent cyberspace interest rates between two countries becomes more apparent. In terms of cyberspace security, there are also complex scenarios in which disputes and limited collaboration are linked. Cyberspace has evolved into a focal point for stakeholder power struggles, conflict sites, and a highly effective tool in geopolitical conflicts. However, cyberspace conflicts are inextricably linked to traditional geopolitical power rivalries. They are, on the contrary, the expression and a new dimension of such rivalries, which exist at all levels of analysis and should be considered part of a multi-scale approach. As the United States and China's interests in cyberspace develop, the tendency of overlaps and dependent cyberspace interest rates between two countries becomes more apparent. In terms of cyberspace security, there are also complex scenarios in which disputes and limited collaboration are linked.

Keywords: *Cyberspace, Military Warfare, Intelligence Gathering, Soft Power, Ubiquitous Communication, Cyber Criminals, Information Supremacy*

INTRODUCTION

In the upcoming years, a country's reliance on the internet will only increase. The global economy today relies on cyberspace and the numerous networks that connect to it. While there is no universally accepted definition of cyberspace, several academics and state officials agree on its influence on national security. As the rising internet usage redefines geopolitical boundaries, these dangers force governments to reconsider their power landscape. Developing countries are not immune to developing to this shift. Although cyberspace usage is not comparable to widespread in a growing nation, current growth rates suggest the state should begin planning for an imminent change in the virtual world. The internet's exponential expansion has revolutionized the lifestyle, and the economy has been transformed and greatly enlarged interaction options. However, it has been increased disputes over fundamental topics such as Internet control and regulation, political networks, economic and military warfare, intelligence gathering, and soft power. Confidentiality concerns and other civil liberties are all areas where networks play a role. As a result, cyberspace has become a source of power struggles among stakeholders, a battleground, and a helpful technique in globalization confrontations. These issues were once confined to a small group of scientists and technologists. Because of the internet's phenomenal expansion and limitlessness in our day-to-day activities, many technological decisions have evolved into political and strategic considerations. States, industry, civil society, and the defence all have to learn more about these issues. Recent research has revealed that threats resulting from internet misapprehension have rapidly increased (Lyu, 2018). The expansion of cyberspace between China and the United States will entangle measures for global administration and norms development aspects critical in handling the many challenges presented by cyberspace. This article will critically discuss how cyberspace impacts peace and security at international levels. It is divided into three significant sections. The first section entails the implications of cyberspace on global relations. The second section covers both regional and global security. The last section will involve a detailed discussion of international governance, citizen's rights, and a conclusion to sum up the research topic.

CYBERSPACE AND NATIONAL SECURITY

The information revolution in the development of cyberspace is the most significant concern for world security today. With attention to the hazards and risks that the information revolution poses to developing countries' national security, three critical developments to strategic considerations are highlighted: Transparency, cyber warfare, and broad cell phone access (Evanthia, 2019).

A Transparency. Given today's communications networks' pervasive and immediate nature, anything in an urban space battlefield is unlikely to be kept secret much longer than the time required to access the network or use a mobile phone. The world is becoming more transparent (Gontovnikas, 2019). Quality imagery is now available to anybody with access to the internet due to the deployment of numerous satellites with Resolutions are greater (Gontovnikas, 2019). Google and Microsoft, for example, provide free or low-cost access to this imagery through their applications on the internet. Many countries have made an effort to limit or regulate the displayed picture, but they unsuccessful because no place on the planet can be hidden. Non-governmental organizations, in addition, utilized images to keep an eye on the accident areas and access state are answerable for absences and crimes. State information is harder to keep because of the potential to spread information via mobile phones and the internet (Dentzel, 2013).

Cyber Warfare. Cyber-attacks are becoming increasingly common on information technology and the internet (Sciarrone, 2017). Cyber-attacks are becoming more likely and harder to detect due to changes in the hardware and physical architecture (Julian, 2014). Governmentally cyber-attacks are another regular phenomenon. China is frequently mentioned as a cyber-espionage actor (Plan, Fraser, O'Leary, Cannon, & Read, 2019). Hackers notably released a dangerous code that may open users' data files and send massive volumes of data to the hackers: this affected defence contractors, defence facilities, and commercial enterprises. Even as computers become secure, hacking tools will continue to advance, causing network insecurity to persist (Julian, 2014). Declaring cyber espionage as a war crime would have far-reaching implications, and countries should respond to cyber-attacks and minimize the problem (Plan, Fraser, O'Leary, Cannon, & Read, 2019).
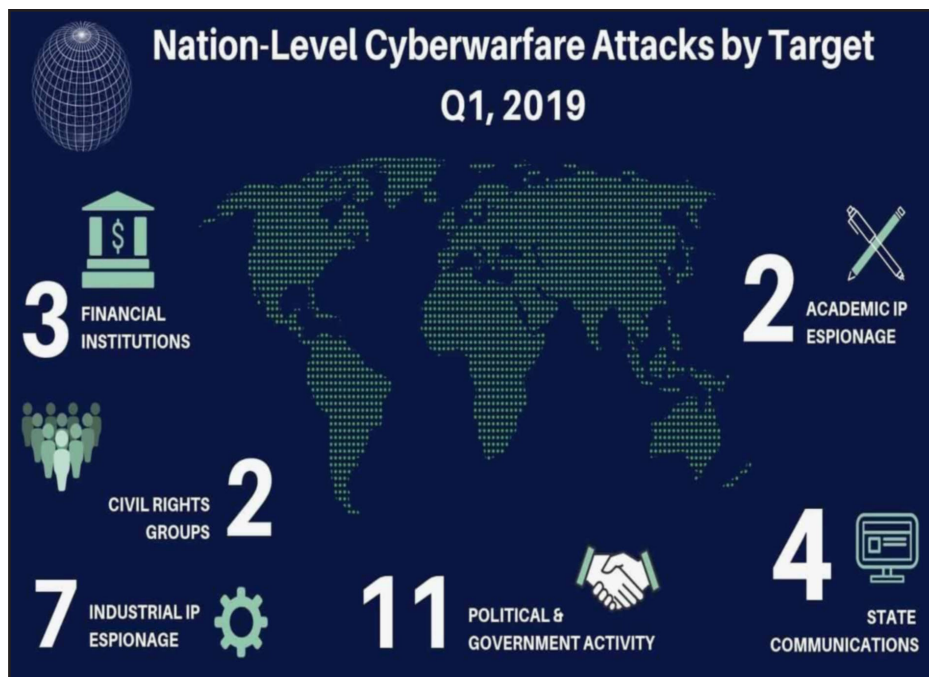
Figure 1: Cyberwarfare Attack by Target 2019

Ubiquitous Connectivity. While global mobile phone penetration has surpassed expectations, Africa and rural India quickly use cell phones and wireless connectivity to revolutionize the information revolution (Evanthia, 2019). Some results of ubiquitous communication have already appeared, but their full impact can only be guessed. Political organizations can mobilize everyone's associates to participate in demonstrations (Evanthia, 2019). The Insurgents recently targeted communication towers as part of the fight with Iraq to cut off services and help with intelligence gathering. Facebook, Twitter, and LinkedIn enable us to communicate with people on a global scale (Kim & Cha, 2017). Before terrorists could disrupt the internet, they must first worry about it as a sign of free and open nations (Swain, 2019). Instead, they took it as a tool for communication and recruitment (Zerzri, 2017).

Essentially, many authorities in different parts of Africa and Asia continents highly depend on advanced data collection methods to effectively monitor and flatten opposition among their people (United Nation, 2020). However, the same tools get used by different groups of people to frustrate the efforts of law enforcers. North Korea has been in the limelight due to its ability to use cyberspace potentials to put down its rivals and earn some revenue from the cybercrime activities (Ketchell, 2017), as evident in the theft scandal of 81 million US dollars from the central bank of Bangladesh in the past years (Quadir, 2019). Fundamentally, critical challenges have been established among the legislators of nations that engage in the act of cyber spying and those targeted for the attack. The prospective of unplanned consequences have also existed, as demonstrated by the NotPetya virus over the past few years (Banerjea, 2018). The NotPetya malware was mainly aimed at spying on the details of the Ukrainian government but ended up spreading to other countries such as Russia, America, and Europe resulting in significant destruction that entailed the loss of billions of dollars (Banerjea, 2018). The malware was attached to the intelligence agency of the Russian army, a condition that appeared to have been establishing the disputes with Ukraine as an experiment for various cyber-attacks as claimed by the Central Intelligence Agency (CIA) (Shepherd, 2021). The effect of such attacks reveals the concept of connectivity paradox in that the most technologically advanced nations are also the primary targets of different kinds of cyber-attacks (Shepherd, 2021).

ICT and Military Power. The concept of armed force has contributed significantly to the existence of power estimation. ICT has impacted how the types of weapons used by a nation's army and their application in different fields (Sung-pyo, 2021). Such technologies have also resulted in developing an advanced spectrum of accuracy-oriented standard weapons that can be used in battlespace with exceptional vulgarity (Sung-pyo, 2021). Further, technological autonomous air-defence systems have developed to be more innovatory and readily available. The situation indicates that America and its defensive allies such as Canada are highly valued (U.S. Department of State, 2020), unlike nations with an antagonistic relationship over the past years.
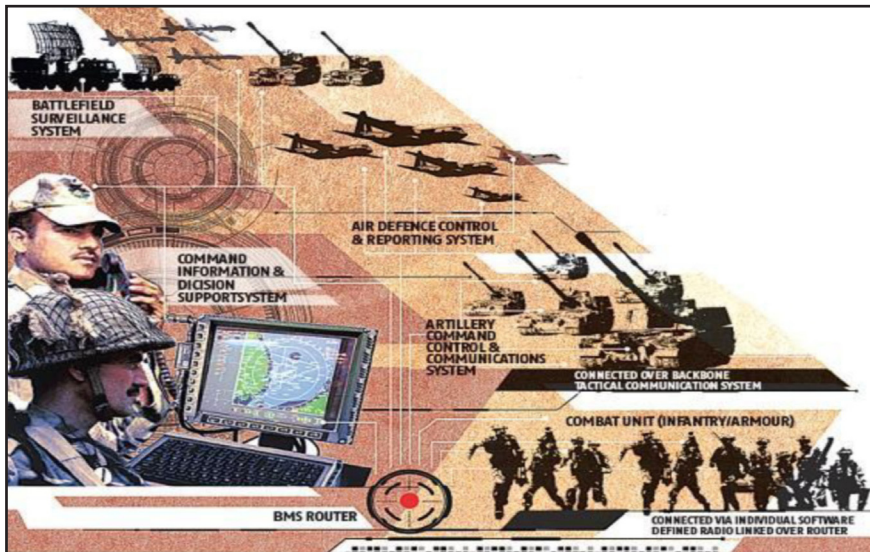
Figure 2: ICT and Military Power

The application of independent air-defence systems has advanced to the extent that non-state parties use them even though (Mallik, 2021). Essentially, practical conducted by several drones to overcome the defensive systems may certainly provide long-term accomplishments such as the United States battle group or at the least transform their effectiveness. The current trend of having a battlespace characterized with significant data has made the armed forces shift to systems that drive solutions independently without human intervention. However, such independent systems are prone to transparency issues resulting in a critical situation where a difficult choice must be made between two courses of action (Gontovnikas, 2019). Additionally, the armed forces should also get ready to battle in an exhausted modernized environment expecting that the rivals will destroy and break down the technology systems that depend on various weapons in the modern world before or after the rivalry (Morgan & Cohen, 2020). Therefore, it has been concluded that most modernized forces would hardly operate efficiently in such an environment (Morgan & Cohen, 2020).

IMPACT ON REGIONAL SECURITY

New Methods of Cyber Warfare. The concept of cybersecurity has developed to be more complicated in the modern era due to the advancement of technologies restructuring warfare (Kosenkov, 2016). The advancement of technologies in modern society has resulted in the development of new techniques such as drones, aerial vehicles that increase the threat of warfare by creating new problems. Notably, there exists an agreement that the usage of armed drones is legal, but no global law has been established to dedicated the use of force to drones. The possible usage of armed drones by non-state nations results in creating more problems (Sciarrone, 2017). The current trend of application of the lethal independent weapons methods has led to the emergence of critical questions related to the running of the present warfare and the implementation of the International Humanitarian Law (IHL).

The opinion of the decision-making activity is critical to applying IHL since the new technologies have developed to become more independent with no human assistance making the determination of accountability difficult. Besides, modern technologies have resulted in more forms of advanced warfare (Sciarrone, 2017). In the present time, improved warfare technologies are readily available across the world at lower prices. Similarly, more technological devices used to back up warfare activities, such as mobile phones, are equally available at lower prices. Besides, the internet has also played a significant role in warfare as people use it to plan and conduct

warfare activities. Additionally, the internet has facilitated significant sharing of information about the warfare activities such as cyber-attacks, training on how to carry it out through social media platforms (Kosenkov, 2016). The emerging engrossment and variance concerning the duty to hack phrase have raised concern to the concept of IHL and security (Kosenkov, 2016). The IHL states that nations should use less harmful equipment to meet their objectives of fostering security among their borders. Less harmful approaches would help in reducing physical attacks that result in significant losses and damages. This theory allows countries to search and spend in threatening hacking measures.

Figure 3: Types of Cyberwarfare Attacks

The incident involved a Mexican cartel using explosive drones to attack police. Two rigged drones were discovered in the car of a suspected Cartel Jalisco New Generation (CJNG) member in August 2020. They were rigged in the same way as the two drones discovered in the car boot of alleged cartel members (BBC, 2021). Drones are supposed to be the newest weapons in a deadly struggle between the drug cartel and security forces and policemen fighting them. The seized drones last year had plastic explosives and ball bearings taped to their containers. Experts asserted that they could have inflicted serious damage with their remote detonation. (BBC, 2021). According to the Zoom company, security incidents are on a rise. Cyber criminals are targeting Zoom users as millions of office workers utilize collaboration platforms to stay in touch with the Covid-19 outbreak (Chailytko, 2020). The threat research team at Check Point stated that this has witnessed a constant increase of newly created Zoom domains, with more than 1,700 registrations since January, but that this trend has accelerated over the last few days, with the registration of 425 domain names in the last seven days (Alex, 2020). 70 of them have identified as forgeries that are imitating legitimate Zoom domains to collect and steal information. The figures support a pattern in which cyber thieves employ Zoom, which is used by over 60% of publicly listed companies and Google Play has received over 50 million downloads (Alex, 2020).

Terrorism and Cyber Crime. Cyberspace enables the decentralization of affiliated groups to pose a threat to hierarchical structures that are rooted in tradition. Global connectivity and computer technology infrastructure that is both secure and collaborative enables multinational corporations that are adversarial-terrorists, rogue corporations, anti-globalization movements, hackers, and organized criminal gangs-to jeopardize national security and stability. The act of terrorism has become a dominant topic on the manifesto of the UNs of fostering global tranquillity and safety. The tension has rapidly increased in modern society as a result of significant development in the Islamic states. The concern hardly discerns cyberspace as endangered as the technologies can be protected but the approach used by the attackers in their operations. The internet and social

media institutions offer powerful platforms for attackers to engage in malicious activities. The attackers use these platforms for many activities, such as influencing people and financial support. Countries have identified using the internet by terrorists as a significant threat to their security as it is directly related to cybersecurity.

Essentially, the development of the optical telegraph has played a significant role in helping malicious people carry out cyber-attacks through the help of Information Communication technologies (Kavanagh, 2018). Committing crimes has been streamlined as advanced technologies, and cyberspace has influenced criminals with virtual platforms of carrying out their activities, fuelling them to go internationally. Cyber-attacks have developed to be severe offences in the present time resulting in significant damage and financial loss. Notably, adopting measures to respond to and curb cyber-attacks has been an issue for many countries. The issue can only be solved in the long run by developing international laws that should be enforced by all countries effectively.

Besides, countries benefit from some of these unlawful potentials, developing significant tensions and subverting trust. Further, most of the time, people who are affected by such activities hardly understand whether they are victims of the crimes or government-supported operations. Essentially, anxiety has been ascended that attackers with advanced technologies are countries to achieve their political and security objectives. Using technologically advanced tools and techniques to commit cybercrimes has transformed Global Governance and Human Rights

Internet Administration and Global Peace and Safety. Cyber-attacks are frequently considered the province of states and cyber espionage. With attacks limited to top-secret environments. However, information and methods for breaching the computer system are accessible to anyone with internet access in the civilian sector. Investigation about how the internet and its elements are controlled and operated have emerged in modern society. The investigations have been conducted to answer questions related to the application of technologies in cyberspace and concerns about global safety and peace (Carr, 2015). Many developing nations worldwide, such as Russia and China, have advocated for the development of essential internet resources and policies to be enforced internationally. Further, other countries such as the European Union members and the United States have urged those issues of internet governance, and measures to foster global peace and security should be handled differently. A separate model on the internet regulatory framework should govern internet usage, while security matters should be handled on a different agenda (Raymond, 2013). Several measures have been developed to govern internet usage globally that include the purchase of the internet.

Citizen Rights, ICT, and Global Peace and Safety. The modern era is characterized by the significant violation of people's rights across the globe due to the harmful usage of Information Communication Technologies by defending nations (Swain, 2019). The immoral use of such technologies by malicious individuals have been used by countries such as those exercising democracy as an explanation for the great scrutiny and limitation to perception and expression, validation of severe measures to restrict the internal opposition, toppling loads of work by rights and groups of activists across the world (Swain, 2019). Necessary disclosure of investigation measures and the current views related to technological advances have also resulted in the revival of a discussion related to the information to supremacy that was first founded in the mid-1900s. The debate entailed ensuring that personal details of each country's citizens were confined within their boundaries. Inadequate accountability on matters related to efforts of nations in addressing ICT-related potentiality and their applications have revealed that valid fear between the rights of citizens and the country's safety is difficult to settle on a plan of action (Zerzri, 2017).

Fundamental rights are compromised when governments launch cyberattacks, such as when Russia's internet was shut down in 2016, as it was in Crimea (Brown, 2016) and Ingushetia in 2018 (Lokshina, 2018), this event happens in Saudi Arabia and the United Arab Emirates when a government hacks into the phone of an activist or journalist. (Marczak, John, Adam, Bahr, & Ron,

2018). People lose their capacity to effectively express themselves, learn, and obtain social activity when the internet is turned down. Hacking by the government violates people's confidentiality and may contribute to more abuses, especially for journalists and civil rights activists. After their governments used hacking to acquire information on their actions, Ahmed Mansoor, an Emirati activist, was arrested, and Saudi journalist Jamal Khashoggi was killed. (Brown D. , 2020). Cybersecurity is used as an excuse by governments like China and Vietnam to increase their hold on the internet and limit individuals' liberties.
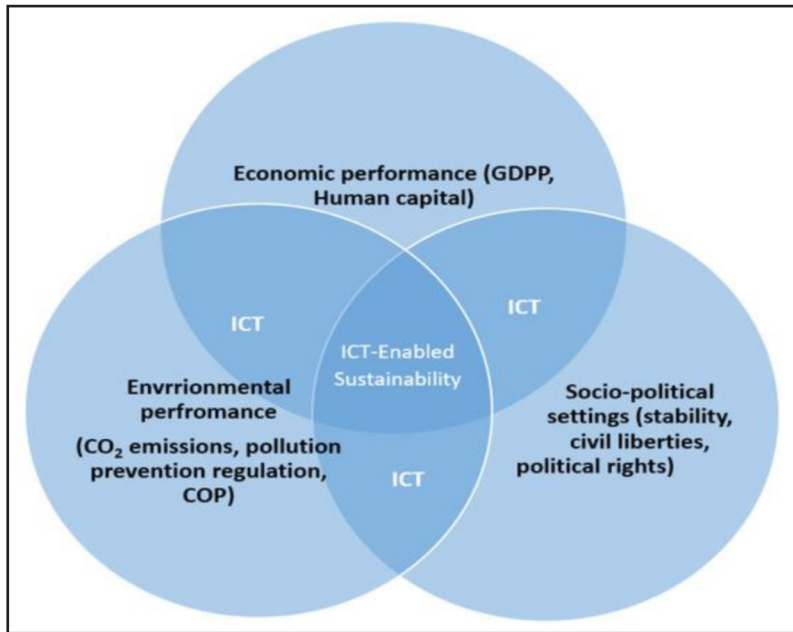
Figure 4: ICT and Sustainability

ANALYSIS

Cyberspace has become a complex concept in the modern era after advancing to critical aspects of society, including the productive and security sectors. Essentially, having a look close to the fragile relationship between the United States and China, this discussion entails the current developments about two-three significant parts: double efforts in the regional and global security sector, cross-national offences, and fear and administration advancement, and rights of citizens.

Initially, unanimity was made by different nations across the globe to agree on the essential techniques of fostering security at both local and international levels. Non- profit organizations were developed to foster such techniques between the representatives of countries, as highlighted in this discussion. Typically, the founded non-profit organizations included Common Wealth of the Independent States and Collective Treaty Security Organization. The organizations concentrated on fostering security techniques, specifically in the Asia continent. However, over the past few years, the Organizations of American States have included the issue of cyberspace in their manifesto. The organizations have adopted various measures to address the issue of welfare and promote peace and security. Besides, such discussions have helped establish cordial relationships among super nations such as America, United Kingdom, China, and Russia.

Further, the analysis of unlawful acts, terrorism, and cyber insecurities has developed a sphere that regularly intimidates participants and malicious individuals. Independent people, institutions, parties take advantage of the attached sphere to extend the concept of terrorism. Modern Information and Communication Technologies, including the internet and social media

platforms, have contributed significantly to the advancement of terrorism. The Islamic states, for example, use these technologies to recruit and train people interested in engaging in terrorist activities. The current indicators of terrorism have highlighted the need for global organizations to be attentive and adopting preventive measures for such activities. However, different strategies have been adopted globally to subvert the intentions of terrorists. Typically, such measures include creating regulatory frameworks that include the Global Counterterrorism Forum, European Union, and others. Besides, strategies also include creating more operational frameworks such as the Internal Referral Unit (Kavanagh, 2017).

Additionally, the overall advancement of technology has dramatically affected the cybersecurity sector. The growth of technology in modern society has resulted in the development of more disastrous weapons such as drones that have posed a more significant threat to the cybersecurity of nations. The new trend in cyber warfare has led to many people raising questions on the legislation making and protecting human rights. One of the critical problems in establishing international peace in the cyber context is coming up with the correct meaning of people's rights that all nations can agree and comply it. Notably, there have been zero advancements in reducing the threat of cyber welfare despite implementing numerous preventive measures.

CONCLUSION

The application of Information Communication Technologies for harmful engagements is one of the significant challenges facing most states across the world in modern society. The aspect ignoring the disastrous cyber threats will negatively affect the unity and stability of the country. The concept of developing legislation by the federal government to solve the highlighted cyber insecurities is complicated. The research has revealed that the current approach of handling common cyber threats is

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CHALLENGES AND IMPLICATIONS OF ARTIFICIAL INTELLIGENCE IN THE MILITARY

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ABSTRACT

AI technology is widely used by modern militaries in the twenty-first century. The military will be part of it to provide robotic assistance on the battlefield as well to create a multilayer capability in decision-making and situations. It's goal as a discipline of computer science is to understand the essence of intelligence and to design new humanoid machines that behave similarly like humans. MAF faces significant challenges as a result of AI's emerging technologies. It must provide a framework that balances innovation, capturing the beneficial advantages of AI, and limiting or eliminating the risks of military AI. This paper establishes a framework for MAF to follow as it develops a national preparedness strategy and plans to capitalise on AI advancements. Additionally, it can evaluate the MAF's doctrines and strategic, operational, and tactical ideas.

Keywords: *Artificial Intelligence (AI), Military, Weapons, Technology, Intelligence, Telecommunications*

INTRODUCTION

Artificial Intelligence (AI) is the study and advancement of hypotheses, techniques, methods, and application systems that mimic, extend, and improve human intelligence. One of the key objectives of AI research is to enable robots to undertake complex tasks that are traditionally carried out by humans. AI has the ability to be utilised across all dimensions (land, sea, air, space, and information), or at certain stages of the conflict in the military environment such as political, strategic, operational, and tactical. AI can be used to destabilize an opponent at the political and strategic levels, for example, by creating and disseminating massive amounts of false information. For this circumstance, AI will very certainly be the greatest choice for defending against such attacks. AI could improve partially autonomous control of unmanned systems at the tactical level, allowing human operators to run unmanned systems more efficiently and enhancing battlefield impact (Ozdemir, 2019). AI technology is widely used by modern militaries in the twenty-first century. Regarding technology, continuous Research and Development (R&D) and rapid production due to manufacturing competition, today will affect 2nd and 3rd world countries to catch up with the military advancement.

ADVANTAGES OF ARTIFICIAL INTELLIGENCE AUTONOMY AND INFORMATION

AI for remote sensing can revolutionize war handling by increasing situational awareness and AI situation detection capabilities. Utilization is possible with AI- enabled technology to deal with massive amounts of data sets, and provide mission- critical information to the Commander, extract actionable intelligence from background noise. The independent group, AI Machine Learning (AI/ML), is now possible can be used beyond the capability of human platforms to perform nuclear ISR missions and detect nuclear weapons and non-nuclear missile launch C4I systems with AI -embedded sensors (Johnson, James, 2020). The use of conventional assets in anti- submarine warfare is increasingly the norm. However, according to the Center for Maritime Research and Experiment NATO (2019) has begun attempts to deploy a Maritime Unmanned System (MUS)

and a smart autonomous ASW network. Its goal is to use hybrid networks to incorporate improved cooperative autonomy, with a focus on merging traditional assets with heterogeneous networks of smart sensors. Unmanned underwater vehicles (UUVs), unmanned surface vessels (USVs), and unmanned aerial vehicles (UAVs) used in the maritime environment may revolutionise ASW and render prevention at sea obsolete as technology advances.

As the ethical, legal, and societal implications of AI and robots become increasingly known, a small generation of new ethical norms emerges. Whether standards express explicit or implicit ethical concerns, all standards incorporate at least one ethical concept (Winfield & Jirotka, 2018). Standards that currently exist are being developed, and little information about them is available to the public such as the BSI British Standards Guide (BSI, 2016). Ethical Design and Application of Robots and Robotic Systems are probably the earliest ethical norms expressed in robotics. BS 8611 is not a rule to follow, but it is a guidance for designers to determine potential ethical hazards, conduct ethical risk assessments of robots or their AI, and mitigate any ethical hazards found. It is based on a collection of twenty different ethical hazards and hazards, classified into four categories: community, application, commercial and financial, and environmental.
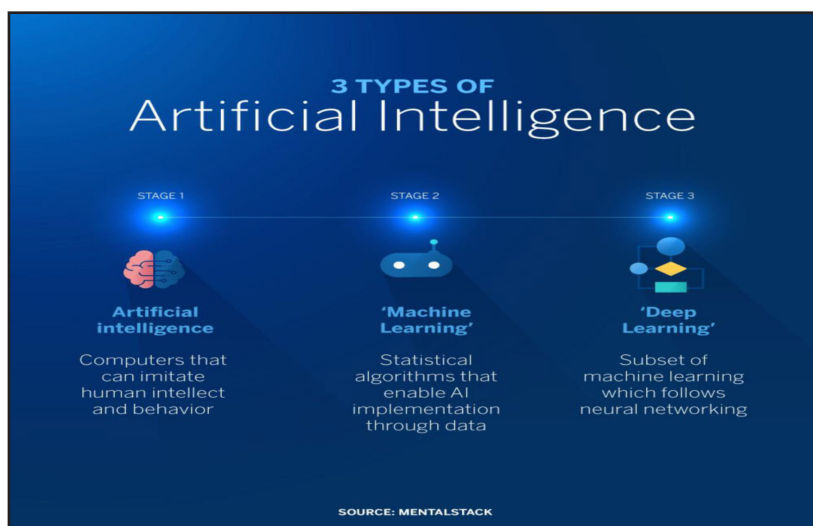
Figure 1: Types of Artificial Intelligence

DISADVANTAGES OF ARTIFICIAL INTELLIGENCE

One of the issues with AI technology is that their intelligence is so limited that, although they may perform well in some conditions, their performance might disintegrate drastically in others. One complicating element increasing sophisticated AI systems is their complexity, which reduces their transparency to human. AI disastrous when the system is incapable facing certain circumstances and it fails due to certain condition. Additionally, AI systems are susceptible to a variety of attacks that are similar to cyber-attacks such as a malware attack and data poisoning. Consequently, militaries which employ AI system, and AI systems will fail. They will be involved in an accident and will be deliberately influenced by its rivals. Therefore, any assessment of AI's involvement in combat must take into account the severe fragility of AI systems and their impact on battlefield effectiveness (Scharre, 2019).

NATIONAL AND INTERNATIONAL STRATEGIES ON ARTIFICIAL INTELLIGENCE

As the underlying technology of AI continues to advance in ways that are unanticipated, policy initiatives are being developed all over the world to keep pace with these advancements. In March of 2017, Canada was the first country to launch a national strategy for AI. Shortly after, technology leaders Japan and China did the same. In light of the factors discussed above, the European Commission has issued a fresh set of regulations to address the expanding field of AI, thereby establishing Europe as a center for AI. These regulations include components such as a coordinated implementation plan and the European approach to AI. Along with a joint effort in Russia to formalize their 10-point plan for AI, the initiative of the United States is expected to be announced soon. The goals of these initiatives, the extent of their investments, and the degree to which they are committed to developing an ethical framework, which will be updated in May 2019, vary greatly from one another. In many ways, Asia has been ahead of the game when it comes to AI strategy. Japan was the second country in the world to launch a national AI initiative. The Japan AI Technology Strategy (Japan Strategic Council for AI Technology, 2017) was published in March 2017 and is a guide for the industry. It includes priority areas in health and mobility, both of which are important given Japan's aging population. Japan envisions a three-stage development plan for AI, the culmination of which will be an AI ecosystem that is fully connected and functions across all aspects of society.

Following closely behind is Singapore. AI Singapore launched a five-year program in May 2017 with the goal of enhancing the capabilities of the country's workforce in the field of AI. The program focuses on industry and commerce, AI framework and testing, AI and R&D talent and practitioners (Teddy-Ang & Toh, 2020). One year later, in 2020, the Government of Singapore announced additional initiatives centered on AI governance and ethics. These initiatives included the establishment of an Advisory Council on the Ethical Use of AI and Data, which was formalized in the "AI Model Governance Framework", which was published in 2019. The framework provides a set of guiding ethical principles, which translate into practical steps that can be adopted by businesses. These steps include the best way to manage risk, the best way to incorporate human decision-making into AI, and the best way to minimize bias in data sets. Over the past few decades, China's economy has seen remarkable expansion, propelling it to the position of having the world's second-largest economy (Pigman, 2007). In July of 2017, the Chinese government announced the "Next Generation AI Development Plan" in an effort to propel China to the forefront of AI research and development around the globe. The comprehensive plan lays out goals with regard to business, research and development, education, moral standards, and safety (Eleanor Bird et al., 2020). It is a three-step strategy for the development of AI, and the goal is to become the world's leading center of AI innovation by the year 2030. This strategy is consistent with Japan. Governance, the creation of ethical guidelines and standards for AI, and active participation in the governance of this technology on a global scale are all extremely important focuses. The strategy, which was formalized under the Three-Year Action Plan to Promote the Development of a New Generation AI Industry, restates its four primary goals, including improving the development of key AI products focused on smart vehicles; service robots; medical diagnostics; and video image recognition production; and creating the basis for AI industry support systems. (*Translation: Chinese Government Outlines AI Ambitions through 2020*, n.d.)

AI has the potential to add 1 trillion Indian Rupees to the economy of India by the year 2035 (Eleanor Bird et al., 2020). The goal of India's AI Strategy, which is known as AI for All, is to capitalize on the benefits of AI not only for economic growth but also for social development and inclusive growth. An important focus of this strategy is to enable people to find work that is of a higher quality. The report proposes thirty different actions that governments should take, such

as encouraging new employee skills, opening up government data sets, establishing a Technology Sustainability Research Center, and establishing a Research Center of Excellence for AI, each of which should have its own Ethics Council. In addition to this, he came up with the idea of India functioning as an AI Garage, a place where emerging economies all over the world could receive solutions that were developed in India.

In addition to the countries that have already been mentioned, Taiwan came out with its own 'AI Action Plan' in January 2018 (Government of Taiwan, 2018) which primarily focuses on the development of new industrial technologies. In May 2018, South Korea presented their "AI Information Industry Development Strategy" to the public (Cho Mu-Hyun, 2015). The report that was based on the Government of the Republic of Korea (2016) provides recommendations for governments that cover a relatively broad range of topics, including data management, research methods, AI in government and public services, education, as well as legal and ethical reform.

ARTIFICIAL INTELLIGENCE IN THE MILITARY

Artificial intelligence is a technology that can be used in a variety of fields, including electricity, computers and internal combustion engines. AI will improve productivity in a wide range of industries. These applications have the potential to cause economic growth and disruption on a scale comparable to that of an earlier industrial revolution. AI is a branch of computer science that deals with the development of programmes that can think for themselves. AI seeks to improve the computer's performance in solving complex problems. AI is increasingly being used in web applications, which has led to significant advances in the field. Today, AI is used in a wide range of applications, including in the military. At all levels of command and military operations, AI is used to support decision-making, e.g., in assessing the readiness, reliability and capabilities of armed forces, as well as in complex mission planning and integrating data from different sources. AI research also addresses the difficulties associated with supporting such decision-making in rapidly changing situations. The use of this technology by the military opens up a whole new world of possibilities.
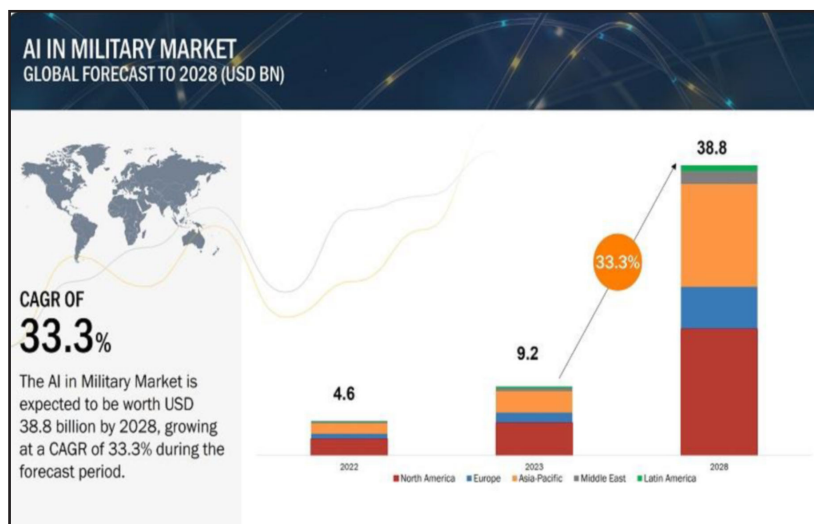
Figure 2: AI in Military Market

AI applications are the result of the fusion of cutting-edge research in the fields of computer science and robotics. The goal is to develop intelligent machines that are able to perform difficult tasks on their own. AI can be used in any field that requires intelligent analysis, precision and

automation. Heavy industry and aerospace, finance, computing, aviation, swarm intelligence, toys and games, weather forecasting, transportation, medicine and telecommunications are just some of the areas where AI has found application. Intelligent capabilities such as pattern recognition, artificial creativity, natural language processing, computer vision, diagnostics, robotics, game theory, non-linear control, chatter bots, virtual reality and image processing, to name a few, enable these AI applications (Anyanwu, 2011).

CHALLENGES OF ARTIFICIAL INTELLIGENCE IN MILITARY OPERATIONS

AI faces a variety of difficulties, but the military faces some particularly pressing ones. These may be organisational, societal or even technological or ethical. Some of the first-order security and reliability problems listed above could derail the project and prevent the long-awaited AI-based revolution in modern armed forces (Michael C. Horowitz, 2018). One of the biggest technological obstacles is the problem of negotiating uncertainty, which makes AI unreliable and requires further development, especially from a military application perspective (Johnson, James, 2020).

The reliability of the system is the second technological obstacle. As smarter people have invented these technologies, there is always a risk that they can be compromised. In the context of national security, hacking can also lead to the exploitation of algorithms developed in networks with a higher level of security (Michael C. Horowitz, 2018). Another hurdle to overcome when implementing AI in the military is the design of the hardware and software. It is difficult to develop software that is both highly secure and robust enough to withstand the rigours of a battlefield. Organisational conflicts and financial problems that slow down output are two other major challenges. Government funding is primarily the only source of funding for defence R&D and is often subject to constraints, tighter oversight and political constraints (Sayler, 2020).

Resistance to change is seen as bad practise that undermines effectiveness and needs to be addressed (Smollan, 2011). Any Management and Armed Forcers have the right to reject AI for a variety of reasons. Because the introduction of AI is difficult to predict and involves a high degree of uncertainty that could lead to undesirable outcomes, there are significant costs and risks. Since AI requires the latest technological advances and facilities, military will not be able to deploy it without money in their management and operations. In addition, a significant amount of money will need to be set aside for AI research and development, and this possibility may be ruled out because of a failure to recognise the importance of potential future benefits or a desire to avoid circumstances where the costs exceed the benefits. However, in order to maintain its stability, military need to evolve over time due to external influences and environmental unpredictability. To maintain continuous improvement techniques in the face of changing conditions and to set a good example for the rest of the military. The cooperation and trust of military personnel in management is the most important component of organisational change, as this demonstrates their trust and ensures a smooth transition for the MAF (ABBE et al., 2021).

However, from the perspective of military personnel, AI can pose more problems, and they are also reluctant to learn and practise new skills because they fear potential threats to their safety and job performance (Erwin & Garman, 2010). As one of the emerging technologies in IR 4.0, AI represents a fundamental shift beyond the way it is managed. Having to keep up with the rapid pace of both IR 4.0 and AI to perform better, the imputed members will react negatively to the continuous growth and evolution of AI. The learning process will continue and there will be stiff competition among students. This case has shown that employees are resistant to change and would not accept new changes (Bateh et al., 2013).

THE CONSEQUENCES AND GLOBAL RACE FOR ARTIFICIAL INTELLIGENCE

The battlefield has changed enormously as a result of technological advances (Holzwarth, 2018). While the lethality and range of weapons have increased, indirect strikes on the target have been the mainstays of war tactics. The threat level has increased and the world's superpowers now have the weapons and technology necessary to destroy the entire globe in a very short time. The biggest obstacle is legislation. There is considerable debate about the problem of allowing non-living beings to choose to cause death and suffering, although this seems to be the main benefit of AI for the military (Chandler, 2019). The race for AI involves the major powers. Numerous studies are being conducted on the use of AI in the military. Powerful nations like the USA, Russia and China are spending a lot of money on developing the latest military equipment.

United States. In 2016, the Army Chief of Staff issued an order to form an experimental combat unit to be called the US Army Multidomain Task Force (Laudun, 2021). This unit was to be equipped with state-of-the-art weapons and equipment, including robotics, to explore the feasibility and effectiveness of the unit in future combat situations, according to a blog post by the US Army Training and Doctrine Command. To detect vehicles and other objects, track their movements and provide intelligence to the military, the US has already launched Project Maven, an AI tool for cybersecurity (Pellerin, 2017). Similarly, DARPA is constantly developing strategic AI to improve national defence (Science et al., 2016). According to Figure 4.1, US will increase the budget in AI from $ 6.26 billion to $18.82 billion by 2025. This shows that the importance of AI in modern days is increasing exponentially.
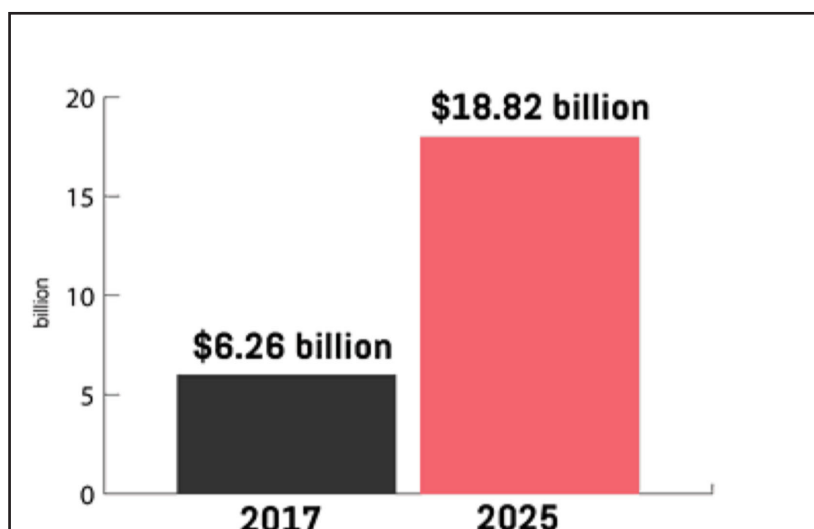
Figure 3: AI budget of 2017 and 2025 (USA)

Russia. In January 2017, Vladimir Putin advocated the development of autonomous robotic systems for the military and the establishment of a new national centre for the development of robotic technologies at ARF, the Russian equivalent of the US Department of Defence's Defence Advanced Research Projects Agency (Nadibaidze, 2022). Russian researchers claim to have developed a novel AI-based missile system capable of switching between targets while missiles are still in flight (Galeon, 2017). They are developing AI-based cruise missiles, anti-drone systems, border protection systems and robots capable of studying radars and determining the altitude, speed and direction of their flight.
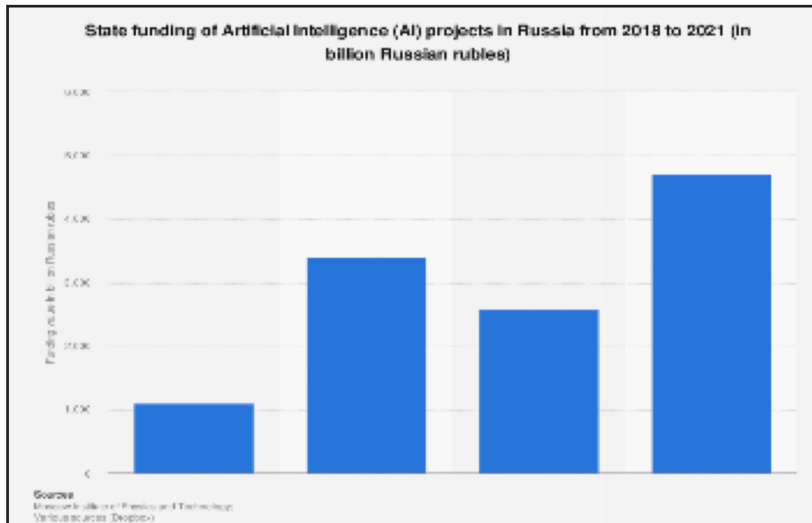
Figure 4: State Funding for AI in Rusia

China. The nation with the fastest economic growth in the world is making rapid strides towards an AI-dominated future. In July 2017, the Chinese government published a detailed, unclassified roadmap outlining a national strategy that prioritises the development and deployment of AI (Webster et al., 2017). According to Jeffrey Ding, the China Lead for the Governance of AI Programme at Oxford University, the gross output of China's core AI industry could exceed $22.5 billion by 2020, and the gross output of AI-related industries could exceed $150.8 billion. Both figures are in Chinese yuan. The author of the paper, titled Deciphering China's AI Dream. This would place China among the most developed nations (Lampton M. David et al., 2020). According to SIPRI, China has become the world's largest exporter of UCAVs, having supplied 153 units to 13 different countries.

Artificial Intelligence and Malaysian Armed Forces. AI is the cutting-edge technology that the MAF must adopt to improve efficient military operations. Since the modernisation of the MAF, AI has been extensively deployed in the areas of signals intelligence, communications and autonomous weapon systems. AI can be used to develop simulations and training to construct various models to acclimatise soldiers to the various combat systems, which is crucial for actual military operations. AI is being used by the navy and army of various nations to develop sensor simulation systems to help soldiers. To create more realistic scenarios, this AI is often coupled with augmented reality and virtual reality.

THE EFFECT OF ARTIFICIAL INTELLIGENCE ON THE POWER BALANCE

The impact of AI on the balance of power Nations around the world are beginning to realise the potential economic and societal benefits of developing and using AI (Horowitz, 2018). The evolution of the AI ecosystem and the stance of AI policy have generated much debate in the country in recent years (Camp & O'Sullivan, 2018). The paper was published in Japan in March, China in July and the United Kingdom in November 2017. The United States presented its AI report in December 2016, France published its AI plan in January and China announced its AI strategy in March (HolonIQ, 2019). Most often, the analogy of the global arms race is used to describe investment in AI for economic and national security purposes. China's AI strategy aims to establish "China's First Mover Advantage" and put the country at the forefront of AI development. Russia has made significant investments, especially in the military industry. On the

battlefield, Russia uses remote-controlled tanks such as the Vehar and the Uran-9. Due to the nature of industries such as robotics, several governments are well positioned to develop and use AI technology for military applications. In Southeast Asia, Singapore is at the forefront of AI investment (military and non- military). The study of AI is also developing in other Southeast Asian countries. To protect the demilitarised zone from North Korean threats, South Korea has developed the SGR-A1 semi-autonomous weapon system (Groth et al., 2019).

Ethical, Operational, and Strategic Risks Associated with Military Artificial Intelligence

The act of fighting is inherently dangerous. In their attempts to achieve military and political goals, belligerents use lethal force, and the outcomes of encounters between opposing forces are highly unpredictable - not only for the parties to the conflict, but also for non-combatants. But risks come in many different forms, and some means and methods of violence are riskier than others. Several categories, including ethical and legal, operational and strategic, can apply to many hazards (Parliamentary Secretariat for Financial Services, 2019).
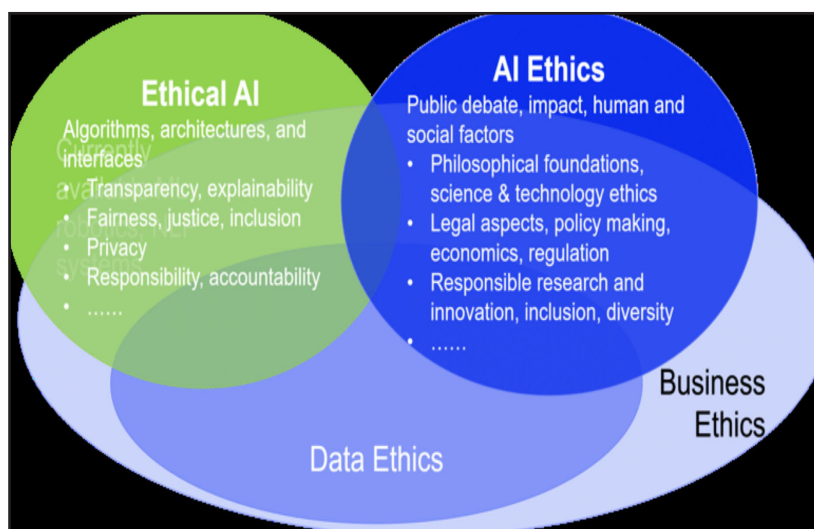
Figure 5: AI Ethics

Moral and Legal Aspect

Legal measures are sometimes based on ethical considerations, although there may be ethical issues that are not yet considered in the law. On the other hand, legal frameworks formal restrictions that shape behaviour often provide a method of enforcing fines for violations and thus an additional motivation for action or inaction. The Law of Armed Conflict (LOAC), commonly known as International Humanitarian Law (IHL), is designed to regulate hostilities and reduce humanitarian harm to civilians (Committee & Cross, 2012). The LOAC is formally enshrined in treaties such as the Ottawa Landmine Ban, the Additional Protocols to the Geneva Conventions and the Four Geneva Conventions. In addition, Opinion Juris and customary state practise serve as its basis. Some of the basic ideas of the LOAC, which have been widely accepted by national governments, are (International Committee of the Red Cross, 2002):

a.   Distinction: Combatants and civilians must be distinguished and military operations must only be directed against military targets;

b.   Proportionality: parties to the conflict are prohibited from taking actions that result in excessive injury disproportionate to the military objective; and

c.   Exercise of caution: Parties to the conflict must take precautionary measures to avoid endangering civilians.

The requirement for legal testing of weapons to ensure compliance with the LOAC is another important element of international law relevant to military AI (International Committee of the Red Cross, 2016). Last but not least, the so-called Martens Clause, a principle of Additional Protocol 1 that refers to safeguards that go beyond legal rights and are based on the "principles of humanity and the dictates of public conscience", is generally interpreted to include LOAC (Ticehurst, 1997). Fully autonomous weapons systems - i.e., those that select and attack targets without human consent - have come under fire for allegedly failing to comply with LOAC's concept of distinction and proportionality. They claim that an AI system cannot distinguish between a frightened civilian and a dangerous enemy because it lacks the intelligence to understand and assess such nuanced cues as body language (Watch, 2012).

In asymmetric conflicts in urban areas, where combatants do not usually wear uniforms or other insignia, distinguishing between combatants and non-combatants can be particularly difficult. Only a human and not an autonomous weapon could maintain the distinction, especially in these circumstances. Since cyber capabilities usually have to be deployed through civilian networks and are often directed against systems owned or operated by civilian entities, their use challenges the notion of distinction (Schmitt, 2011). According to critics, autonomous weapon systems cannot uphold the principle of proportionality because it requires a subjective, case-by-case assessment of the harm caused by possible collateral damage compared to the importance of the military target. Determining proportionality requires "more than a balance sheet of quantitative data"; it requires a human being to evaluate and compare complicated values in order to make an evaluative, qualitative and ethical judgement (Human Rights Watch, 2018). These reasons lead to the conclusion that the use of autonomous weapons is prohibited under current international law. The responses to these arguments show that there is a conceptual difference between the general illegality of autonomous weapons and specific types or uses of autonomous weapons. Some academics argue that while autonomous weapons systems as a whole are not prohibited on these grounds, specific systems can be created that do (Schmitt, 2011). Almost all weapons have the potential to be used in ways that violate the LOAC, so how they are used is an important consideration. These commentaries also claim that autonomous weapons will continue to evolve, making it easier for these systems to violate the LOAC. They also mention instances where the use of autonomous weapons poses a low risk of injury to civilians, such as in wide waters, under the sea or in relation to individual military targets. In these circumstances, systems could be fully LOAC-compliant as they do not need to undertake demanding qualitative assessments of differentiation and proportionality.

Accountability

The accountability gap created by the use of autonomous weapons is another ethical risk. Accountability has several advantages. First, it serves as a deterrent to harmful behaviour by seriously threatening to take disciplinary action against the guilty parties if the behaviour continues. Second, it ensures that a particular actor is accountable for taking the necessary action to ensure compliance with the applicable legal requirements. Third, accountability is a fundamental moral concept that refers to moral responsibility for an act. This includes determining what is an appropriate moral punishment, what are morally acceptable feelings such as shame and guilt, and

who is responsible for making things right or seeking moral redress when something wrong has been done. In view of this, accountability plays a crucial deterrent, moral and ethical function not only in conflicts but also in all areas of society (Verdiesen et al., 2021).

Truth Decay, Privacy, and Human Rights

The many potential dangers AI poses to human rights and individual privacy form a final group of ethical risks. Facial recognition, persistent ISR, Big Data analytics and other AI-enabled technologies could open up new opportunities for autocrats to suppress information, target dissidents and generally violate basic human rights (Human Rights Watch, 2018). Investment in the military and the development of AI applications could potentially lead to an even greater proliferation of tools that have the potential for nefarious use. Mobile phones, other network connections and networked devices - commonly referred to as the 'Internet of Things' - offer the potential for surveillance and spying. Other societal problems, such as the declining value of unbiased facts and data - a phenomenon known as "truth decay" - are likely the result of information operations that spread misleading information and exploit cognitive and social biases (Kavanagh & Rich, 2018). To sow discord and influence political discourse in the United States and other countries, Russia has already used automated accounts posing as real people on social media platforms. The foundation of shared beliefs, presumably necessary for democratic societal stability, is exposed to additional threats through the potential to develop capabilities to create convincing false films. In addition, machine learning algorithms may produce results that unduly disadvantage certain groups, particularly minorities, if the training data is biased or does not adequately represent the population. Critics have also argued that AI has the capacity to enable profound social change and can have a variety of additional impacts on human rights and society. They say that increasing military spending will accelerate the development of technologies that have these unfavourable consequences.

Operational

Operational risks are hazards related to how AI is expected to function in defence- related applications. They are threats to the use of military AI that could lead to unintended or unexpected failures. Depending on one's theoretical or philosophical perspective, these risks may or may not be considered ethical in nature. Nevertheless, many AI technologists and other experts have expressed serious concerns about these vulnerabilities. The problem with AI trust also extends in the opposite direction, where operators or commanders may place too much trust in AI systems, even though these systems are prone to error. Automated bias, which occurs "when a human decision maker disregards or fails to look for contrary information in the face of a computer- generated answer that is believed to be correct", has been linked to problems in studies of aviation and other applications. This over-reliance on the system has potentially significant implications (McConnell, 2017).

Respect and Dependability

The risks of reliability and trust include those associated with too little or too much trust in systems. When it comes to the former, there are a number of obstacles that make it difficult to trust AI-enabled technologies. First, there is a problem sometimes referred to as the "black box problem" (Automation, n.d.). This refers to the fact that AI systems, such as those enabled by deep neural networks, draw conclusions and produce results that are not obvious or easily explained to humans. This presents a challenge for researchers and developers. The problem is that sophisticated algorithms make it inherently difficult to retrace the steps of a system to determine how it arrived at a particular result. Human operators cannot build trust in the system to use it properly if they do

not understand how it works. As a result, they may miss potential benefits of the system or misuse it in ways that could be harmful.

Strategic

Risks that are considered strategic are those that make it significantly more difficult to achieve goals at the national level. The United States is not the only country interested in the military applications of AI; China, Russia and other countries are also interested. These developments raise concerns about the stability of the international order.

Thresholds

One advantage of using UAVs and military AI, as stated in Chapter 2, is that such devices can be used in "dull, unclean, and risky operations." Hence, the use of autonomous systems may lessen the risks for military personnel. Detractors, however, have noted that this quality of autonomous systems also increases the likelihood that authorities may decide to utilize armed autonomous systems rather than pursue nonmilitary alternatives. The cost to innocent civilians will rise as military action escalates under this strategy because the threshold for taking military action will be decreased (Wareham, 2014). The burden of armed conflict would shift from soldiers to civilians in fighting zones as a result of autonomous weapons lower thresholds for conflict (Human Rights Watch, 2018). Since civilian casualties in wars are unavoidable, the impact on civilian populations may increase if the employment of autonomous systems expands military operations. There is a risk that conflicts will worsen if military alternatives are used more frequently.

CONCLUSION

AI has the potential to influence the political landscape as well as the strategic, operational and tactical dimensions of conflict. The military uses AI for a variety of purposes, including autonomous weapons systems and target acquisition, surveillance, cybersecurity, homeland security, supply chain management and self-driving vehicles. AI, like computers and electricity, has a variety of defensive applications and is widely used. Military strategy, operations, logistics, personnel and training will all be influenced by AI. Some military AI applications, such as autonomous lethal weapons and nuclear operations, have failed miserably. Radio communication allows operations to be coordinated remotely. Unlike individual inventions such as nuclear weapons, the impact of AI on combat will be more akin to the Industrial Revolution, where many changes were brought about by the widespread adoption of general- purpose technologies.

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CLIMATE CHANGE AND ITS IMPACT TOWARDS MILITARY

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ABSTRACT

Climate change is a risk to the global security because it increases the vulnerability in infrastructure, agriculture, energy and other factors. The security consequences of climate change will be determined by how it affects and interacts with the local political, social, and economic conditions as much as by the magnitudes of the climatic shift itself. A changing climate will have real impacts on military and the way it executes its mission. The military could be called upon more often to support civil authorities and provide humanitarian assistance and disaster relief amid more frequent and more intense natural disasters. Coastal installations are vulnerable to rising sea levels and increased flooding while droughts, wildfires and more extreme temperatures could threaten many of the training activities. The supply chain could also be impacted. These impacts increase the frequency, scale, and complexity of future defence missions, requiring higher cost of military base maintenance and impacting the effectiveness of troop and equipment in conflict.

Keywords: *Climate Change, Military, Humanitarian Disaster, CIMIC, Readiness*

INTRODUCTION

Climate change is one of the most pressing challenges of the present and the future. Across most of Asia, the average annual temperature has increased over the past century and the frequency of heatwaves has increased since the middle of the 20th century. Temperature has been rising by 0.14-0.20°C per decade since the 1960s (Hijioka et al 2014). The warming trend and the increase in heat are also evident in the Pacific. For example, in the western tropical Pacific, a region that stretches from Papua New Guinea (PNG) to the Cook Islands, the frequency of hot days and nights has more than tripled since 1951 (BoM and CSIRO 2014). According to the United Nations Development Program, the Covid pandemic has demonstrated how shocks emanating from disruptions in life systems and climate change affect people and change societies. A changing climate will increase vulnerability by exacerbating tensions related to water scarcity and food shortages, natural resource competition, underdevelopment and overpopulation. It acts as an accelerant of instability, which may lead to violence. These disruptions will burden civilians and military institutions around the world. Climate and Security are intimately linked. According to "The Climate-Security Instability Cycle": *climate impacts the environment, environment impacts land, land impacts people, people impact threat, threat impacts security* (GMACCC, 2019). Rising temperatures and sea levels, as well as extreme weather events, are manifestations of climate change that influence military capability. Military, being huge energy consumers, contributes significantly to the climate change, However, at the same time, they are usually the responders when climate-related disasters hit.
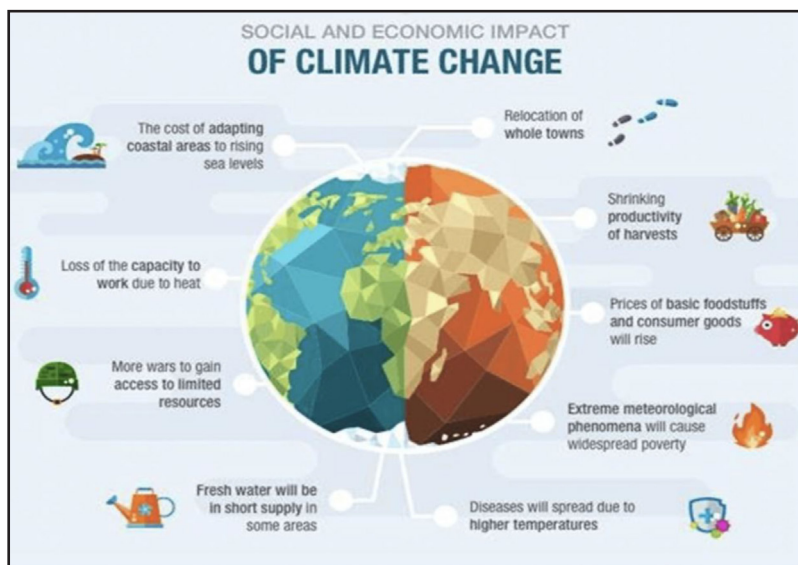
Figure 1: Social and economic impact of Climate Change
Source: Iberdrola

THE RELATION OF MILITARY AND CLIMATE CHANGE

Nowadays, the national security is no longer about counting tanks, counting missiles, or counting terrorist cells, and threats do not just come from other states. The rising intensity and duration of environmental disasters are the most visible aspects of climate change as far as the international security is concerned. Climate change worsens the tensions and increases the risk of conflict between states as the sea-level rises, coastlines retreat and the eventual submergence of small low-lying islands affect the maritime boundaries and exclusive economic zones where natural resources are located (IMCCS, 2020). Other than that, it also fuels economic and security problems that can trigger the involvement of the military forces. The problems include humanitarian disasters (extreme weather events, rising sea levels, land degradation, food insecurity, water scarcity), climate mass migration, regional conflicts caused by droughts, energy insecurity and threats to critical infrastructures including transportation, health and many others.

In Poland, troops disposed of thousands of fish on the banks of the Oder River that had died due to rising water temperatures and pollution (Lopes, 2022). In Mexico, military airplanes attempted to spur rain after weeks of drought by seeding clouds with silver iodide and acetone. In Switzerland, the army airlifted water to thirsty livestock in dry mountain pastures. In more than 10 European nations, forces were deployed to fight fires, including in neighbouring countries, while in countries as disparate as China, India, Iran, Pakistan, Uganda, the United Arab Emirates, and the United States, militaries rescued citizens from unprecedented floods. The phenomenon of heat wave in July melted a British Royal Air Force runway in the United Kingdom and led to wildfires that interrupted training exercises across the country. A U.S. military training facility in Germany was engulfed in flames in August, likely due to drought. Also in August, the U.S. Defence Department warned of flood risks to its personnel and facilities in Seoul as South Korea faced its heaviest rainfall in 80 years.

Climate change also represents one of the greatest threats to long-term regional stability in Southeast Asia. Southeast Asia has been classified as one of the most vulnerable regions to

climate change, with all Association of Southeast Asian Nations (ASEAN) countries apart from Singapore listed in the top 50 most climate-affected between 1997 and 2016 (Secretariat, 2016). The top ten included Myanmar, the Philippines, Vietnam and Thailand. Indonesia has the world's second longest coastline, and Jakarta is the world's fastest-sinking city. There have been reports that parts of Ho Chi Minh City, Manila and Bangkok will be underwater by 2050. In other words, the ASEAN Region is not devoid from disasters. ASEAN member countries face a range of natural disasters such as floods, typhoons, tropical storms, epidemics, drought and earthquakes. In many ASEAN countries, militaries are the anchor in any disaster relief operation even though other government agencies are present. Therefore, every time disaster happens because of the climate change, the militaries will be the at the frontlines. Although Malaysia has seen its fair share of natural and man-made disasters, flooding has come to be the most common of the natural disasters faced. Malaysia experiences two monsoons, the Southwest Monsoon from late May to September and the Northeast Monsoon from November to March. Each time disaster occurred, the Malaysia Armed Forces (MAF) would be the back bone of the disaster relief operations. Like any armed forces in the world, MAF is a necessity force for the defence of the sovereignty of Malaysia and acts as a deterrent towards any other nation with hostile intent towards it. It is responsible for the safeguarding of the nation against an external threat (Mail, 2021). The reliance on the respective armed forces becomes the obvious choice as first responders, since they are consistently prepared and equipped to be deployed in the harshest of environments and situations.

Figure 2: Malaysia Armed Forces Rescuing Victims During Heavy Flood in 2022

THE IMPACTS OF CLIMATE CHANGE TOWARDS THE MILITARIES

According to a study, climate change has increased the likelihood of military conflicts by up to 3-20% in comparison with the previous century. If the current emission trends continue, this possibility will increase five times. Similar studies have also demonstrated that there is a clear relationship between the adverse impacts of climate change and regional violence. The impacts of climate change have been more prominent in the regions which have suffered from ongoing military conflicts or economic hardships. More destabilizing impacts of climate change on those countries will aggravate their security problems including armed conflicts, illicit activities, and mass migration. Militaries are concerned about climate change because it is their job to address all credible threats to their respective nation's security. These threats come both directly and indirectly, including direct threats to military installations from sea level rise and extreme droughts, and indirect threats through the exacerbation of instability in critical regions. Climate change presents risks to three elements of military effectiveness: readiness, operations and strategy.

Readiness

Readiness refers to the ability of a military to carry out operations in a timely manner (Alexander Glavinov, 2020). This involves having a stable and secure military infrastructure, including bases, supplies and logistics, in order to carry out missions. Climate change effects such as the rise in the sea level have the ability to compromise coastal military installations that are critical for such operations. Other extreme weather events, such as droughts and flooding, can also be the stressors to the critical military infrastructure.

Operations

Climate change effects impact military operations, be it war-fighting operations or humanitarian missions. For example, climate change can place significant burdens on the supply chains and logistical capacity of armed forces engaged in the "theatre (Schornhardt, 2021)." Extreme drought or flooding in areas where militaries are engaged in warfighting, for example, can compromise water supply lines, and thus, threaten military personnel directly. Extreme drying can also increase the likelihood of non-state actors using the seizure of water resources as leverage against populations and adversaries. An increase in the frequency and intensity of natural disasters may also put a strain on the capacity of armed forces to deliver humanitarian assistance and disaster relief (HADR).

Strategy

Climate change can impact military strategy by way of increasing the possibility of destabilizing conditions in strategically-significant regions of the world (Security, 2019). In the Arctic, a melting ice cap, coupled with increasing tensions between Russia and other Arctic nations, could increase the likelihood of conflict. In the Middle East and North Africa, climate change effects on water security may increase the probability of instability in the future. In Central Asia, increases in glacial melt and flooding, coupled with existing security dynamics (such as terrorism and nuclear materials proliferation), can create a volatile mix. In the broader Asia-Pacific region, rainfall variability will interact with a growing urban and coastal population, as well as an increasing demand for energy, to present enormous challenges to security in this increasingly important part of the world. Migrating fish stocks in the South China Sea may create pressures on the fishing industry to move into contested water, leading to increased tensions among China, its neighbours and the United States. These risks can increase the likelihood of militaries being called on to resolve conflicts, or provide post-conflict assistance. All of these dynamics will pressurise the military strategies.

Effect on Military Installations and Equipment

The most direct and obvious significance of climate change for the military is its impact on the military infrastructure. Low-lying military installations such as naval bases are particularly vulnerable to rising sea levels and intense weather events. Extreme heat may impact training, and changes to ocean buoyancy caused by melting ice may influence submarine operations. Extreme weather events are affecting the energy production as well as energy transportation, transmission, and distribution infrastructure, causing supply disruptions of varying lengths and magnitudes and affecting other infrastructure that depends on the electricity supply. In the US, climate change directly impacts the military readiness, impacting installations and operations in a number of ways

that include the availability of quality land and ranges, reductions in water supply, causing greater flood and fire hazards, and weather risks to the electricity supply (Birnbaum, 2022). Installations near the coastlines are threatened by coastal erosion and sea level rise, damaging the infrastructure and reducing the land available for operations. The impact of climate change can be felt at the installation level. For example, unusual torrential downpours and resultant flooding caused $64 million in damages to 160 facilities and other infrastructure components at an Army installation in the Southwest. On the Alaskan coast, several Air Forces' early warning and communication installations are facing challenges with the rising sea level, diminishing sea ice, and thawing the permafrost. Additionally, the coastal erosion has damaged essential infrastructures, including runways and seawalls that are estimated to cost $25 million to repair.

Training

Intensified heatwaves will present challenges to outdoor training and personnel efficiency. Climate change may also affect military supplies, affecting where they are purchased and the methods of transport and storage. Strained access to staple resources, damaged infrastructure, and mass migration present challenges that ensure the stability of the regions abroad, creating environments ripe for terrorist activity.

Weaponaries

Climate change will also impact the design of current and future weapons systems to account for extreme weather. Due to conditions such as prolonged temperature exposure, moisture, or sand, weapon planners need to plan for increased maintenance needs, and to plan to have more units in the field to maintain a ready force (Stoetman, 2023). It is anticipated that more health risks would emerge from exposing troops to greater heat, having to deal with dustier training grounds and field environments and needing to cope with phenomena like erosion and flooding lapping at its facilities. In other words, in the future, planners must account for an increasingly hostile climate based on today's trends.

Figure 3: Impact of Climate Change towards Military

More Demands in Response to HADR and Peace Keeping Operations.

The military's response to threats to human Security and natural disasters and climate change means that more demands will likely be placed on the military for activities beyond war: in particular, for humanitarian responses to natural disasters and for climate change adaptation. The military could be called upon more often to support civil authorities and provide humanitarian assistance and disaster relief in the face of more frequent and more intense natural disasters. For example, in Australia, climate change is causing an increase in the intensity of floods, bushfires, droughts, and extreme heat-typically summer phenomena-thus, the Australian Defence Force planning includes having force elements ready to be deployed at short notice in response to natural disasters in Australia (Parker, 2021).

The military will also probably have to deploy more peacekeeping forces or delegate authorities to regional organizations due to climate change issues in certain countries. The military also needs to play a new role in dealing with Civil Military Coordination (CIMIC), specialised training in disaster management operations, liaisons and international humanitarian operations, such as during Tsunami 2005. This shows that only the military can provide special equipment and troops for the people in short term but it is worthy of note that military is the last resort and should not take any task from civilians at the initial stage. The new challenge for the military is clear, as more humanitarian operations require more specialised training at all levels and for all ranks.

ROLES THAT MILITARY COULD PLAY IN DEALING WITH CLIMATE-RELATED SECURITY PROBLEMS

The humanitarian disaster after the heavy floods in Pakistan is a striking example that can be observed, to understand the impacts of climate change on both national security and armed forces. As a country prone to the flood risks caused by climate change, Pakistan has been suffering from its worst flood in its history. More than 2000 people have been rescued in the humanitarian operation launched by the Pakistani Armed Forces where the floods have killed more than 1200 people including 416 children (IFRC, 2022). This example highlights the importance of the military forces and its readiness to operate in an environment in which they have difficulties in logistic flows and in meeting the needs of a significant population. The climate change will complicate the planning and conduct of military operations.

Coordination and Collaboration with Other Institutions

The frequency of natural disasters caused by climate change and complex emergencies has shown that, despite differences in approaches and objectives, a dialogue between military and humanitarian actors to respond to crises remains essential. The growing interaction between both parties on the ground presents an array of unique opportunities to achieve protection outcomes, despite the fact that there are also inherent tensions. The military could have a dynamic and direct coordination capacity with other national and international institutions in order to distribute aid and mitigate the damages brought about by the disasters. It is also a positive move if the military could pay attention to the scientific reports, including the latest IPCC report that show climate-related wildfire, drought, flood, and heat wave risks in order to plan their strategic capabilities and force deployment structures. Other security threats such as mass migration and armed conflicts over limited vital resources including water may exceed the response capacity of national armed forces.

Military as Climate Mediators

The end of the Cold War changed the paradigm of the role and scope of the military force in the management and resolution of conflicts. With an increasing intervention by the international community, the new generation of peacekeeping operations has adopted a multidimensional approach to military force to be used in coordination with other instruments of power, ensuring a proper strategic framework considering the desired end state (Klare, Februari 2020). The military has always played an important role in international relations. However, its priorities have been changing, adapting to the evolution of strategic contexts, successively used first as a means of coercion, then as a deterrent and more recently as a tool for the prevention and resolution of conflicts. At a national level, for example, the armed forces of Chad participate in programs such as reforestation projects that combat environmental threats caused in part by the desert moving 150 kilometres south over recent decades and Lake Chad shrinking by almost 90 percent (News, 2018). The Republic of Haiti has created a defence force that contributes to climate change adaptation, construction of resilient infrastructure, and emergency response to natural disasters. Perhaps, the core concern for planners working on the climate security is *"not in direct links between climate and violent conflict, but in the ability of climate change to disrupt those systems that underlie stability and human security more generally"*. In other words, one must emphasize building resilience, not only of natural systems but also of governance and institutional structures and systems, including most particularly those at the local level

Military as Defence Diplomacy Tool to Cope with The Climate Crisis

The increasing visibility of climate change is only matched by the growing awareness of the threat it poses, with militaries likely to face more pressure to develop their humanitarian assistance and disaster relief (HADR) capabilities while also maintaining traditional defence capabilities. Defence diplomacy, broadly understood as military-to-military interactions, activities and policies to build and maintain national security, would be a useful tool for states to advance their foreign policy goals in the ongoing climate crisis.

One useful aspect of defence diplomacy is that it needs not only be among countries with close relationships. As it can build confidence between states, it can also involve the cooperation, or at least the execution of military-to-military cooperative activities between rival countries. Climate change presents diverse opportunities for mutually beneficial cooperations, such as providing HADR in a world facing increasingly extreme weather events. Rival countries could participate in HADR exercises at least multilaterally, if not bilaterally. After all, climate change affects everyone, and excluding rival countries in climate cooperation limits any real response. The Changi Regional HADR Coordination Centre in Singapore is one such example of regional defence diplomacy (Nanthini, 2022). The centre shares information on disasters in the region, facilitates military-to-military coordination and deployment and holds exercises. By hosting military officers from around the world, it also creates a network of international liaison officers. While the centre may not work specifically in climate security, its role as a regional centre facilitates engagement between militaries. After all, sustained and substantive military-to-military interactions allow states to improve their understanding of each other's strategies and, importantly, establish lines of communication.

Figure 4: Military as Climate Mediator by Bridging the Gap

Developing Policy on Climate Change

A multilateral security approach should be adopted by all nations to develop a comprehensive global climate adaptation capacity to limit the spread of violence after climate-related disasters. Some countries are making progress on this front. For example, the EU's Strategic Compass for Security and Defence, which was released in March, requires all member states to develop strategies to prepare their armed forces for climate change by 2023. The French defence ministry released its climate security strategy, in which it noted the likelihood of increased demand for military resources to support domestic disaster relief operations and emphasized the need for further study to develop inter-ministerial processes to manage deployments (Barron, 2022). The Japanese defence ministry released its first climate security strategy, which highlighted the need to reinforce the country's military facilities against typhoons and update equipment to withstand extreme heat.

As for ASEAN, it has convened the 13th Meeting of its Joint Task Force on Humanitarian Assistance and Disaster Relief, the Expert Group of the International Military Council on Climate and Security (IMCCS) urging leaders to make climate change a "security priority" in the Indo-Asia Pacific region (Sectretariat, 2022). As the region's key platforms for multilateral defence cooperation, the ASEAN Defence Ministers' Meeting and Defence Ministers' Meeting-Plus are well placed to address military responses to the climate crisis. Broadening their mandates to include climate security, either as a separate expert working group or part of the Experts' Working Group on HADR, this will allow militaries to coordinate and expand their base of mutual knowledge on climate-related disasters. As the probability of another climate-induced mega-disaster such as Typhoon Haiyan or Cyclone Nargis looms ever-closer, regional militaries should jointly develop a framework for climate-induced disaster responses before the next disaster hits.

Equipment and Sources

Strategies mean nothing without resources, so militaries must also invest significantly in equipment and personnel. The design of military equipment will need to evolve in line with the latest strategic thinking on climate change. The military will face pressure to lower its carbon footprint and move toward hybrid vehicles and alternative fuels where possible, but it will also need to procure equipment, including military vehicles, that are adapted for a world where climactic conditions have changed. Two key areas where the military vehicle or any machinery design will change in response to climate change, are designing equipment for climate resilience and the role of policy makers and defence industry players toward climate change (Shirley V. Scott, 2016).

Designing equipment for climate resilience. Climate-resilient vehicle design is being advocated not simply in response to a more challenging environment, but also to take advantage of new strategic opportunities (OECD, 2018). Another point is that there is a growing need for military involvement in disaster relief. The growing frequency of extreme weather events will also likely see services deployed in response to environmental disasters, both domestically and overseas. While extreme weather might have historically been seen as being outside the remit of military actors, policymakers are now conceptualising extreme weather events as threats to security, and military assistance is increasingly required as part of the humanitarian assistance and disaster relief. In this issue, the defence industry should play closer attention to the implications of a world where extreme weather events persist.

Education and Training

Military in any country should leverage its extensive international military education and training programs to ensure that its allies and partners have the skills to responsibly manage climate-driven disasters (Erin Sikorsky, 2021). This could include guidance on developing and integrating climate hazard early warning systems, evaluating the climate resilience of military facilities and equipment, and increasing the collaboration with the civil society and humanitarian actors ahead of crises. In Southeast Asia, already one of the world's most disaster-prone regions, climate change is set to increase the intensity and frequency of extreme weather events. As the region's primary responders to disasters, militaries will need to scale up their capabilities through regional defence cooperation and defence diplomacy, therefore, education and training are crucial.

WAY FORWARD

The science is very clear: Even if all emissions made non-existent completely, over the next 10 to 20 years, temperatures will continue to warm, extreme weather will intensify, and wildfires will spread. Militaries will be called on in countries, rich and poor, to respond. Taking the time to learn lessons from this summer and implement new approaches will help militaries around the world keep their countries' territories and citizens safe and put the world on a more stable trajectory.

In future military operations, military information and intelligence, surveillance, and reconnaissance (ISR) capabilities need to be set to have a far greater impact on the humanitarian assistance and disaster-relief activities. ISR assists civil agencies as well as government and nongovernmental organizations in assessing the nature and quantity of supplies needed, based on the number of victims, available resources, and determining priorities (Demirtas, 2014). For example, during the Haiti earthquake on 12 January 2010, the US military received orders to

assist the disaster-relief efforts of the US Agency for International Development. Navy P-3 aircraft, RQ-4 Global Hawk remotely piloted aerial vehicles, and satellites were used to collect images that helped determine the status of roads, bridges, seaports, humanitarian needs, and routes by which to transport relief supplies.

Next, governments and militaries should continue to find ways to pool resources. For instance, any country in the world, could emulate the EU model of a shared firefighting fleet, calibrated to the specific climate hazards they face in their geographies. Such an approach not only makes financial sense for countries with limited budgets and competing security priorities, but it also provides opportunities to strengthen trust, exchange best practices, and ensure the interoperability among neighbouring militaries and civil protection services.

Better coordination between security communities is critical for combatting climate-related security threats. Synchronization and networking among the international security communities working to address climate-related threats, such as through the International Military Council on Climate and Security, can facilitate information exchange and the sharing of lessons learned. This includes sharing the world-leading expertise of Indo-Asia Pacific militaries in responding to climate-driven disasters.

Climate change should be higher on the list of the regional security agendas. Therefore, security communities around the world have a set of responsibilities to prepare for, and prevent, these foreseeable security challenges, alongside development and diplomatic actors. The responsibilities include supporting the climate resilience by strengthening military capacities for Humanitarian Assistance and Disaster Relief operations, and improving responses to climate threats by supporting long-range planning within the government.

The military cannot avoid addressing climate change and, indeed, is already doing so. The relationship between military activities and climate change is bidirectional. The military must tackle new challenges, yet at the same time reduce its own environmental footprint and adapt to the climate change threats. The implementation of energy transition policies creates opportunities, but also new dependencies, both in the raw material and industrial sector. (Forum, 2021). In the context of armed forces, the adaptation to the changing environment such as increasing power struggles around resources issues, new conditions and of intervention and new type of mission, is pivotal.

CONCLUSION

Climate change is predicted to strain the economies and societies around the world, placing an additional burden on already-vulnerable nations abroad and putting pressure on the domestic capacity. Climate change will alter the nature of military missions, demand more resources, at the same time be vulnerable to rising sea levels and other impacts, and require a multilateral response to the growing humanitarian crises that the climate change is predicted to bring. There is no doubt that the military may be part of the solution in responding to the climate change while on the other hand, the military may itself exacerbate the problem. In many cases, the military is the only organization able to respond on the scale necessary, because at the same time the priority of militaries lies in looking after the sovereignty of the nations. Having said that, the international cooperation on the political level is of paramount importance, for the effectiveness of the military responses to climate-related disasters.

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