

- v. **Mission-Orientated.** Malaysia's maritime territory covers four important waterways namely, the Straits of Malacca, South China Sea, Sulu Sea and Sulawesi Sea. The strategic sea and air lines of communications, together with maritime areas that are rich in hydrocarbons and sea-based produce must be protected and defended. The Government needs to ensure that these lines of communication are safe and secure for national assets to ply uninterruptedly between both theatres. The MAF must have the capability to deploy forces beyond the landmass and adequate air and maritime capabilities to increase Maritime Domain Awareness (MDA) in those areas.
7. The MAF will continue to assist the civil authorities to ensure peace and security as and when required by the Government.

Capability Requirements

8. The Government's long-term plan to develop the Future Force is focused on the need to build capabilities and bridge identified gaps to protect national interests, as well as to defend the sovereignty and territorial integrity. The essential capability requirements based on priority are as follows:
- i. Strengthening the MAF's defence intelligence;
 - ii. Developing Cyber Electromagnetic Activities (CEMA) capability;
 - iii. Enhancing Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) capability;
 - iv. Building Network Centric Operation (NCO);
 - v. Building Satellite Communication (SATCOM) for enhanced Joint Command and Control capability;
 - vi. Sustaining and enhancing the MAF Special Forces capability and operational tempo;
 - vii. Maritime Domain - Enhancing Maritime Strike and Maritime Sustainment capability;
 - viii. Air Domain - Enhancing Air Defence and Air Strike capability;
 - ix. Land Domain - Enhancing firepower, mobility, communications, logistic capability; and
 - x. Developing amphibious capability.
9. Summary of the Future Force capability requirements is illustrated in Table 4.1. These capability requirements will ensure the MAF's high level preparedness to carry out of operations effectively in the designated areas.

Table 4.1: Capability Requirements for the Future Force.

ALL DOMAINS	COMMAND, CONTROL, COMMUNICATIONS AND COMPUTERS		
	INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION AND RECONNAISSANCE		
	SPECIAL FORCES OPERATION		
	COMBAT SERVICE SUPPORT		
CYBER ELECTROMAGNETIC DOMAIN	CYBER ELECTROMAGNETIC ACTIVITIES		
AIR DOMAIN		STRATEGIC STRIKE	
	AIR DEFENCE/AIR PATROL		
	CLOSE AIR SUPPORT		
		MARITIME AIR PATROL/ANTI-SUBMARINE WARFARE/ANTI-SURFACE WARFARE	
	TACTICAL AND STRATEGIC AIR LIFT/COMBAT SEARCH AND RESCUE/MOOTW		
MARITIME DOMAIN		ANTI-AIR WARFARE/ANTI-SURFACE WARFARE/ANTI-SUBMARINE WARFARE	
		PATROL/SEARCH AND RESCUE	
		MINE WARFARE	
		STRATEGIC SEA LIFT/AMPHIBIOUS OPERATION/MOOTW	
LAND DOMAIN	MOOTW/CBRNe		
	GROUND BASED AIR DEFENCE/COASTAL DEFENCE		
		WATER MOBILITY/AMPHIBIOUS OPERATION	
	TACTICAL AIR LIFT/ARMED RECONNAISSANCE		
	LAND MOBILITY & MANOEUVRABILITY/FIRE POWER		
	CORE	EXTENDED	FORWARD

10. The Government understands the need to address capability gaps to prevent further deterioration of the readiness level. This includes replacing obsolete and ageing assets, and maintaining current operational assets. However, considering the current economic challenges faced by the nation, the long-term proposed plan to acquire and sustain the required capability for the next ten years has to be realistic and reviewed periodically.
11. The Government shall provide complete infrastructure support such as camps, bases, military housing (*Rumah Keluarga Angkatan Tentera, RKAT*) and other facilities necessary to maintain current and future operations. This would include the redeployment of troops to Sabah and

Sarawak, which requires new camps, bases and RKATs. Infrastructure support will be one of the key elements to ensure force readiness and the success of the two-theatre operations.

12. In developing the required capability, the MAF will adopt modern technologies such as AI, drones and other state-of-the-art surveillance tools to reduce dependence on the workforce in conducting related operations.

Force Posture

13. Malaysia renounces the use of force as a means of settling disputes or conflicts as it advocates peaceful settlements of those disputes. The Government manifests this by adopting a defensive posture of which Concentric Deterrence is an integral part of the national defence strategy. In line with the Interest-Based principle, the MAF will systematically protect the national interests according to the core, extended and forward areas.

Core Area

14. The MAF is tasked to defend national sovereignty and territorial integrity, covering the landmasses, territorial waters and the airspace above them. These areas encompass land and maritime boundaries with neighbouring countries with dense tropical forests and mountain ranges, and expansive coastlines. External threats such as militant groups could infiltrate and set up “safe havens” in the Malaysian jungles to conduct insurgency operations. The Lahad Datu intrusion in 2013 was a bitter experience, an important lesson for Malaysia to continue developing jungle warfare capabilities for Counter-Insurgency (COIN) operations as these are still relevant in this modern day.
15. The landmasses in the core area is also going through urbanisation with the emergence of large cities as a result of rapid economic development. This situation poses a new challenge for the MAF, especially in its ability to operate effectively in urban areas. The result of disorganised Operations in Built-Up Areas (OBUA) can be devastating as witnessed in Mosul and in Marawi in 2017. Therefore, the Future Force needs to be able to conduct OBUA and Close-Quarter Battle (CQB) more effectively to fulfil current and future operational requirements.
16. As Malaysia is a maritime nation with land territories divided by the South China Sea and with more than 800 islands along its coastline, the MAF will establish an Amphibious Force to protect national interests in the core area and beyond. The Amphibious Force needs to be equipped with new **Multi Role Support Ship (MRSS)** as the current logistic support vessels are not designed for amphibious operations.¹ The MRSS is also essential in conducting two-theatre operations and MOOTW when needed.
17. Throughout this DWP implementation period, priority is given towards enhancing detection capabilities with sophisticated ISTAR systems supported by a faster decision making and communication loop, via NCO initiatives. During the first term of the DWP, the MAF will enhance its detection capabilities. For this purpose, the Future Force requires additional new **air defence radars, coastal surveillance radars and unmanned systems** to support its operations in the core area. **Communication equipment** will also need to be upgraded for more secure communications and better coverage.

¹ The current KD Sri Indera Sakti (1503) and KD Mahawangsa (1504) were delivered in 1980 and 1983 respectively and are well beyond their service life.

18. The MAF needs to enhance its indirect fire capability for rapid deployment and to project firepower beyond land to deter threats from reaching the core area. The Future Force requires **155mm Self-Propelled Howitzer (SPH)** as the primary indirect fire support which can also be used for coastal defence. The MAF also needs to replace their ageing **105mm Light Howitzer** with newer guns that have longer range and better precision. The MAF will maintain the existing Multiple Launch Rocket System (MLRS) for long-range indirect fire support.
19. The use of modern fighters and Stand-Off Weapons (SOW) means that the MAF needs to have a more advanced air defence capability to secure the core area and the airspace above it. The Future Force would require a new **Medium Range Air Defence (MERAD)** system that could defeat medium range aerial threats. The MAF will maintain the current Very Short Range Air Defence (VSHORAD) systems for force protection. With the addition of MERAD, the MAF will gain an integrated layered air defence system as prescribed in the National Air Defence Strategy (NADS).
20. Mobility and firepower are important for manoeuvring and fighting in modern warfare. The MAF needs to replace its ageing **Armoured Vehicles (AVs)** with newer ones with better protection, increased firepower, higher endurance and with amphibious capability. This is to ensure Armoured and Mechanised formations can be deployed throughout the core area where terrain can be very challenging particularly in Sabah and Sarawak. The Future Force would also require **Tactical Transport Helicopters** for quick deployment and assault boats for riverine and coastal operations. Meanwhile, the MAF will maintain the existing armoured vehicles for current operational requirements. Additional **Troop-Carrying Vehicles (TCVs)** and combat engineers' bridging equipment need to be added to increase mobility within the core area.
21. For protection of airspace and to support land, maritime and amphibious operations in the core area, the Future Force requires **Light Combat Aircrafts (LCAs)** for Close Air Support (CAS), Battlefield Air Interdiction (BAI) and intervention operations to support Multi Role Combat Aircraft (MRCA). The LCAs will also perform dual roles as Fighter Lead-In Trainer (FLIT) which are currently tasked to the BAE Hawk 108/208 and Aermacchi MB-339. These new aircrafts will be cost-effective assets and can be utilised for a wide range of missions, operations and exercises. The MAF urgently requires the LCAs to enhance its pilot training programme and to ensure sufficient and capable aircrafts for current and future operations.
22. For maritime operations within the core area, the MAF will deploy **Littoral Mission Ships (LMS)** that could conduct a wide variety of missions including SAR and HADR, counter-terrorism and anti-piracy, intelligence gathering and reconnaissance, hydrography and mine countermeasures. The LMS is modular by design and can be fitted with additional weapons and systems to meet future operational requirements. Due to urgent operational needs, the MAF will acquire additional LMS within this DWP period. The Future Force also requires new **Fast Interceptor Crafts (FICs)** and **Special Force Boats (SFBs)** which are suited for operations in littoral environments. The MAF also plans to acquire **Autonomous Underwater Vehicles (AUVs)** and **Mine Disposal Vehicles (MDVs)** to support maritime operations in the core area.

Extended Area

23. Malaysia's MMZ is very vast, covering the EEZ, continental shelf and the airspace above them. Air and maritime capabilities are needed to enhance the MDA for better operating picture within the extended area. The MAF needs to achieve Sea Control on the surface and sub-surface through Sea Denial and Sea Assertion. Therefore, the MAF relies on two classes of warships which are the Littoral Combat Ships (LCSs) and the New Generation Patrol Vessels (NGPVs)

that are able to operate in these areas with the required range, endurance and capabilities. The new LCS will be complemented by helicopters and enhanced Anti-Air Warfare (AAW), Anti-Surface Warfare (ASuW) and Anti-Submarine Warfare (ASW) capabilities to support its missions. Meanwhile, the current NGPV can be retrofitted with additional weapon systems if required. The new LCS will replace the older classes of frigates and corvettes in stages.

24. The MDA will be further enhanced with **Maritime Patrol Aircrafts (MPAs)** and **Medium Altitude Long Endurance Unmanned Aerial System (MALE UAS)** to conduct maritime patrol from air. The MAF requires new **Maritime Mission Helicopters** to augment the capabilities of newer warships that will be operational before the end of the DWP period. All the sensors and communication systems from the warships, MPA, MALE UAV and helicopters will be linked with the MAF's NCO Centre for a greater MDA in the extended area. Additional air defence radars will achieve complete 24/7 radar coverage as well as control and policing over the airspace.
25. The Government acknowledges that it is a challenging task for the MAF to solely protect and defend the extended area. Thus, cooperation with other security agencies such as the MMEA and enforcement authorities such as the Department of Fisheries (DOF) could expand the coverage to secure the MMZ. The MAF is also tasked to support the enforcement roles of other security agencies.

Forward Area

26. To protect and defend Malaysia's national interests abroad and to fulfil global responsibilities as well as to conduct operations in the forward area, the MAF relies on its air power (MRCA, aerial tankers, strategic airlift), submarine force and Special Forces. To effectively defend the forward area, the MRCAs are capable of conducting strategic attacks and Offensive Counter Air (OCA) operations against air, maritime and land targets. Currently, the MAF depends on its F/A-18D and SU-30MKM aircrafts for these missions and replacements will be made once these aircrafts reach the end-of-life by the 14th and 15th Malaysia Plans respectively.² MRCAs are part of an important element to achieve control of the air that consists of radar (sensor) and fighter aircraft (shooter).
27. For long-range naval strike and deterrence in the forward area, the MAF currently operates two "Perdana Menteri" (Prime Minister) class submarines which are capable of conducting stealthy manoeuvres at long range with anti-surface and anti-submarine capabilities.³ These two submarines were commissioned in 2009 and 2010 respectively and provide the MAF with superior capability in monitoring the movement of foreign warships and submarines into Malaysian waters.
28. The MAF also places a high priority on the capabilities of the Special Forces in conducting special operations in the forward area. The Special Forces gives the Government certain advantages in protecting national interests in the forward area. Priority will be given to the MAF Special Forces in acquiring new specialised weapons and equipment to conduct their operations. Additionally, training and capacity development will be continued with friendly countries' and defence partners' Special Forces.

²RMAF intends to complete the No.18 Squadron to 18 Hornet aircrafts during the 12th Malaysia Plan. The F/A-18D and SU-30MKM is the most potent combination in the region that gives advantages to Malaysia over other countries.

³KD Tunku Abdul Rahman and KD Tun Razak were built by DCNS and Navantia based on the Scorpene SSK. Beside Malaysia, Chile and India operate the same submarine with each having 2 and 6 respectively. Brazil recently ordered 4 Scorpene SSK with the first submarine expected to be delivered in 2020.

29. The MAF continuously supports the United Nations Peacekeeping Operations (UNPKOs) worldwide and other international bodies' monitoring operations. The MAF has participated in numerous PKOs, military staff and observer missions since 1960, including the current deployment of a battalion with the United Nations Interim Force in Lebanon (UNIFIL). The MAF will continue to support Malaysia's foreign policy commitments towards world peace and collective security.
30. The MAF's forward area operation capability has proven to be effective and successful in protecting Malaysians and national interests abroad. The MAF Special Forces operatives were among the first Malaysian security personnel on the ground in the Donetsk Oblast to negotiate for the safe return of the MH17 "black box" and recovery of the bodies of its crew and passengers in 2015. During *Op Pyramid* in 2011, RMAF aircrafts brought home 3,482 Malaysians stranded during the conflict in Egypt. The MAF was also involved in anti-piracy operations in the Gulf of Aden, Arabian Sea and the Indian Ocean during *Op Fajar*. RMN vessels and MAF Special Forces operatives were deployed to escort both Malaysian and foreign nations' merchant ships along these high-risk waters and successfully rescued MT Bunga Laurel and its crew from Somali pirates without any casualty in 2011.



Defence Intelligence

31. Credible and actionable intelligence consisting of all spectrums of threats is essential to safeguard our national interests at home and abroad. Information gathering and analysis, security and counter-intelligence as well as special intelligence operations need to be conducted across the concentric areas. Intelligence can also be gathered through cooperation with intelligence agencies at national, regional and international levels.
32. More sophisticated assets and equipment are required to improve intelligence gathering at tactical, operational and strategic levels. The assets are to detect foreign subversive action and intervention before it reaches Malaysian waters. Among the assets required include the Geographic Information System (GIS), satellite monitoring system and the expansion of the Integrated Intelligence Centre (IIC).

Network-Centric Operations (NCO)

33. The networking of command and control systems are important to ensure smooth implementation of joint command and coordination of military units from different Services and in conducting multi-domain operations. Continuous and seamless operational integration from tactical to strategic level would require new communication equipment and systems, as well as enhancement of secure SATCOM to operate at the most optimal decision making, command, control and communications loop. This will enable faster decision-making processes resulting in quicker operational tempo.
34. The MAF needs to enhance the NCO Centre capabilities through the procurement of necessary equipment and infrastructure including remote sensing required for Command, Control, Communications, Computer, Intelligence, Surveillance, Reconnaissance and Targeting (C4ISRT). This NCO Centre will also conduct optimal Joint Operations combining land, air, maritime and cyber electromagnetic domains to achieve maximum situational awareness, as well as rapid and precise decision making in order to overcome and defeat threats in all domains.
35. Command and control network systems are important to ensure seamless joint command and coordination of military units from various Services in numerous theatres of operation. The NCO is a system that utilises networking sensors in order to achieve shared awareness in the field and command centre. Currently, the NCO capability has been developed based on an experimental joint operation environment which enables the MAF to operate in a joint and integrated manner, with real time information sharing for quick decision making and decisive actions to achieve maximum impact.
36. C4ISRT significantly contributes towards information superiority in order to achieve mission effectiveness. This element aims to obtain competitive advantage over an opponent in the operation area. The Government is committed to enhance the NCO capabilities required within the DWP period.

Cyber Electromagnetic Activities (CEMA)

37. The MAF, in close cooperation with NACSA and other relevant agencies, play a vital role to support the protection of the CNII from constant cyber and electronic attacks. MAF operations rely on internet connectivity and secure cyber communications to ensure freedom of action in its daily operations. NCO also requires immense utilisation of cyber infrastructure for data

links. These are vulnerable nodes that are exposed to deceptions, exploitation, or cyber-attacks. Clearly the cyber domain is a new area of sovereignty to be secured and protected at all times.

38. Hence, the MAF is planning to establish a Cyber Electromagnetic Command (CEC) to strengthen and coordinate CEMA. The responsibilities of the planned CEC will cover the following operations:
- i. **Enhance Cyber Operations.** Conduct cyber defence operations, cyber exploitation operation, cyber attack operation and develop cyber expertise, in line with the active defence concept as stipulated in MCSS;
 - ii. **Enhance Electronic Warfare (EW) Capabilities.** Conduct electronic protection, EW support and electronic attacks;
 - iii. **Enhance Spectrum Management.** Plan, coordinate and manage the use of the Electromagnetic Spectrum through operational procedures, engineering and administration to de-conflict all systems.
39. Under the CEC, the MAF will establish the Electronic Warfare Support Centre (EWSC), Electronic and Cyber Warfare Centre (ECWC), and Information Fusion Centre for Cyber Electromagnetic Activities (IFC-CEMA) as per Figure 4.2.

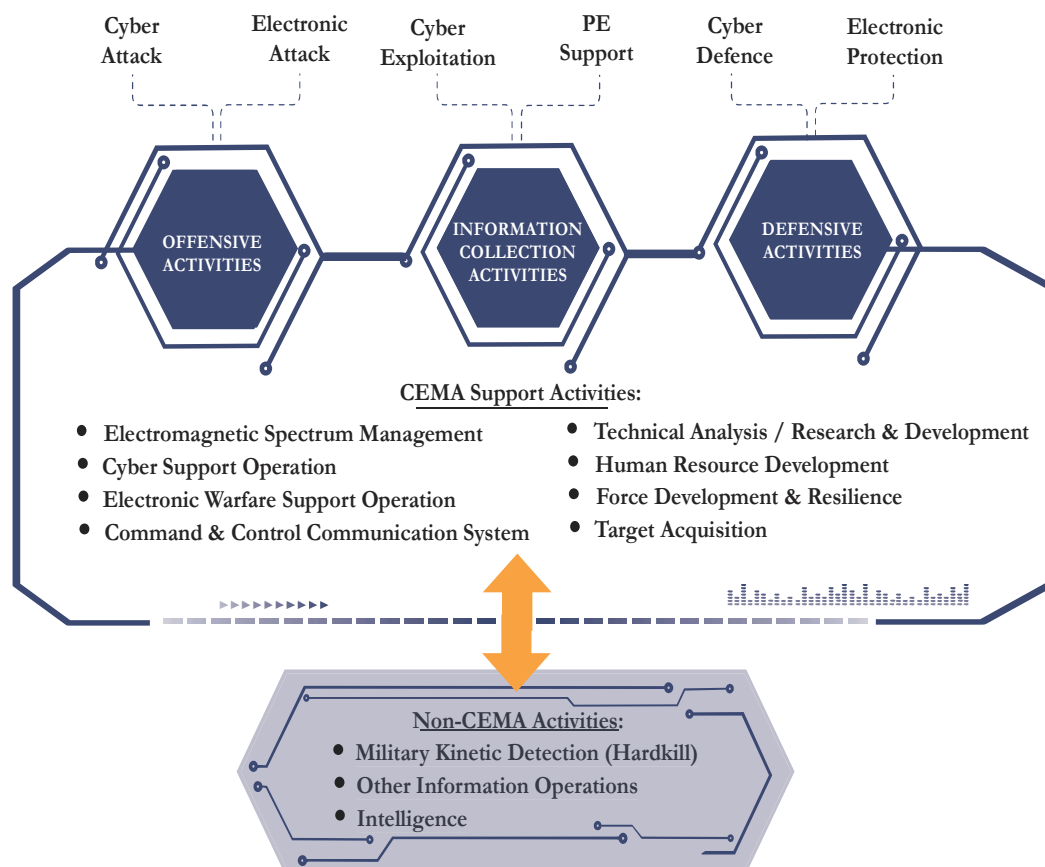
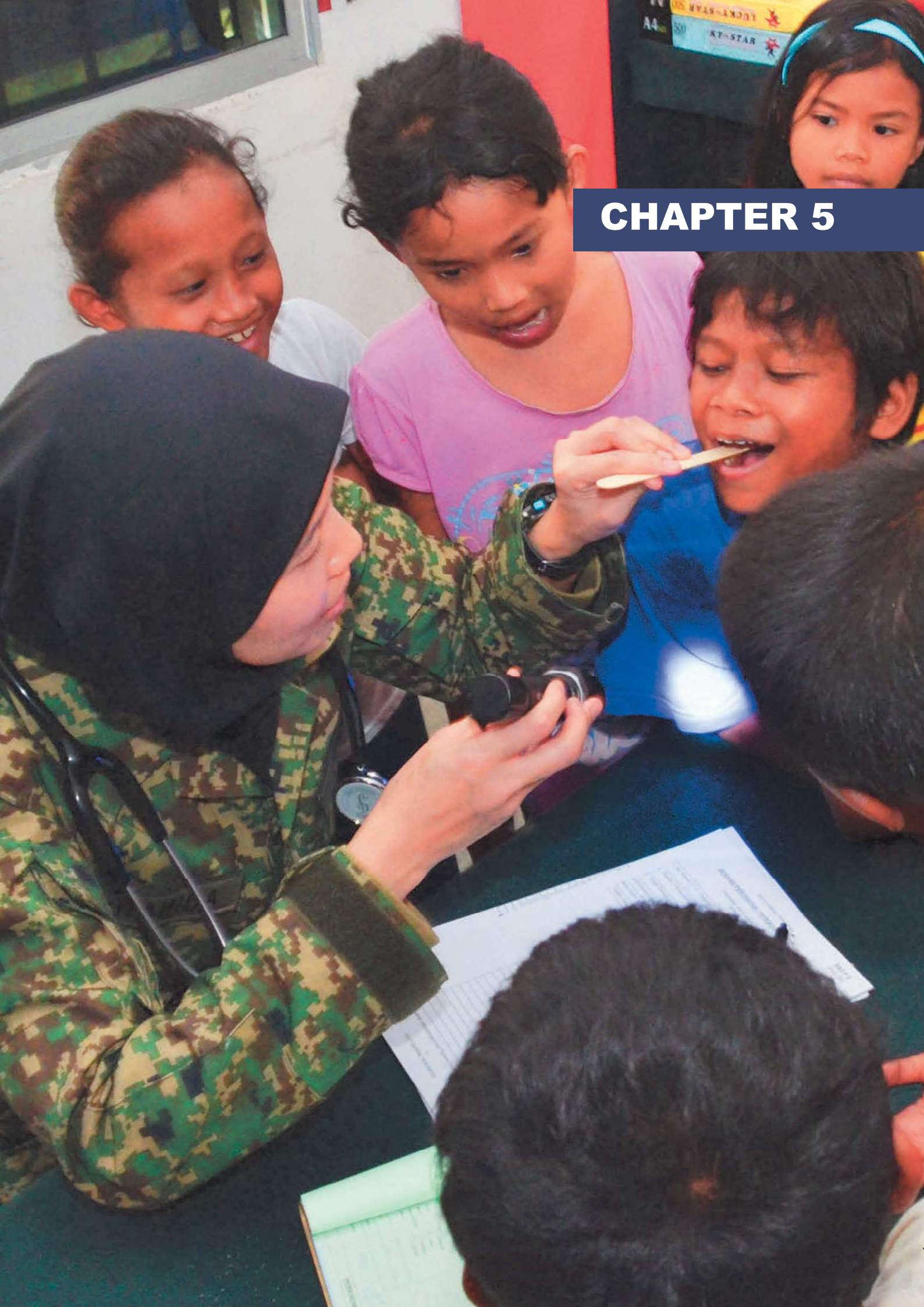


Figure 4.1: Operationalisation of MAF Cyber Electromagnetic Activity.



Catalyst for Developing the Future Force

40. The capabilities and assets described in the DWP for the Future Force are the MAF's requirements to realise the National Defence Vision. **The DWP states the realistic requirements needed by the MAF to project Concentric Deterrence based on real capabilities.** The Government will strengthen the force structure and posture to enable the MAF to protect Malaysia's national interests, particularly to defend its sovereignty and territorial integrity.
41. The MAF will continue to build on credible partnerships to bolster its national defence capabilities. Concurrently, the MAF will reassess its secondary roles which involve its highly valuable and critical assets and equipment in assisting the civil authorities, and its role in nation building.
42. The defence capability plans described in this chapter will catalyse the restructuring and provide the MAF capabilities to develop its Future Force. The development of defence capabilities identified here, will enable the MAF to achieve the set objectives based on national interests, whereas a stable budget will ensure the successful implementation of this plan.

A healthcare worker wearing a black hijab and a green and brown camouflage military-style uniform is examining a young boy's teeth with a wooden dental stick. The boy is holding the stick in his mouth. Several other children are gathered around, watching the procedure with interest. One girl in a pink shirt is looking closely, while another girl in a blue shirt is also visible. The scene appears to be in a classroom or a community center, with a red wall and some educational posters in the background. The text "CHAPTER 5" is overlaid on the right side of the image.

CHAPTER 5

PEOPLE IN DEFENCE

1. National defence is for the *rakyat*, through the participation of the *rakyat*, in accordance with the emphasis on shared responsibility for security. This chapter addresses the role of the *rakyat* in Malaysia's defence: both the people in the defence workforce and the *rakyat*, as a whole. It also describes in what ways both groups play their roles as the core elements of **Comprehensive Defence**, the second pillar of the national defence strategy.
2. The Malaysian defence workforce is renowned for its high-level professionalism, adaptability and integrity. The workforce plays a major role in defending national sovereignty and protecting national interests. The workforce also contributes towards nation-building and supports the civil authorities to ensure national security.
3. The defence workforce consists of MAF personnel from all three Services of the Regular Forces, namely the Malaysian Army, RMN and RMAF; as well as the Regular Forces Reserve (RFR), Volunteer Forces, veterans and civil servants in the defence sector.
4. Integration within the defence workforce and its collaboration with the *rakyat* are keys to ensuring Malaysia's defence is comprehensive, persistent and sustainable. To ensure defence preparedness, the workforce needs to work closely together to enhance its overall strength by developing innovative measures to cope with risks and uncertainties. The *rakyat* needs to maintain security awareness at the highest level, in addition to participating in defence and security initiatives. These will ensure the whole-of-nation resilience is attainable.
5. This chapter emphasises Comprehensive Defence as one of the core approaches in the DWP. The Government is committed to focus on each aspect of this whole-of-nation approach. The nation's defence is not only the responsibility of the MAF, but also government agencies, private sectors and the society as a whole.

Regular Forces

6. In order to develop new capabilities for future operations, the MAF will realign its current structure and review the deployment of its personnel in the coming decade. To meet future demands, enhanced human resource management is essential in order to continuously strengthen the MAF's preparedness. Operational readiness and mission accomplishment can only be ensured if the MAF personnel are recruited, developed and their skills retained in ways that enhance the nation's overall ability to meet and confront all emerging challenges. These require the MAF to reassess into the concept of raise, train and maintain to achieve Comprehensive Defence.
7. To meet the MAF's future requirements, the Government shall review the current roles of the RFR. The RFR is made up of ex-military personnel who are required to serve for a term of five years upon completion of their services.
8. The Government will also increase Civil-Military Cooperation (CIMIC) activities to support the Comprehensive Defence pillar. CIMIC activities represent the MAF's primary mechanism for synergy with civil agencies and the *rakyat*.
9. In order to address the ever-changing security environment, the Government will continue to modernise the MAF through recruitment, career development and retention of personnel in line with the requirements of the Future Force.



Recruitment

10. The Government will prioritise the recruitment of highly qualified individuals who are competent, particularly in the fields of science, technology, engineering, management and other relevant skills to ensure it has a sustainable and highly compatible Regular Forces in delivering the National Defence Objectives set out in this DWP.
11. The Government is assessing the increased use of Information and Communication Technology (ICT) and its application in implementing current and future military operations. As such, emphasis will be given to recruit Regular Forces personnel based on the nine pillars of the IR4.0.
12. To accentuate a diverse MAF, the Government will work towards making the MAF a preferred career of choice that attracts participation from people of various backgrounds. At present, efforts are being carried out by the Government to achieve 10 percent of women in the MAF in the near future to realise Malaysia's commitment towards United Nations Security Council's Resolution 1325 on Women, Peace and Security. To encourage female participation in the workforce, the Government will continue to provide necessary support to women in the MAF. These include ensuring equal career progression opportunities, provision of nursing facilities and subsidised childcare services.

Career Development

13. As part of career development and progression, the Government acknowledges the importance of education. The development of a highly professional military workforce is accomplished through the combination of training, education and self-development programmes. Priority will be given to the enhancement of technical and managerial expertise.

14. At present, there are changes to the MAF personnel development efforts due to the increasing complexity of operational scenarios and technological advancements which require higher technical, analytical and leadership capabilities, in line with the development of smart soldiers and national agenda towards a “knowledge-based society”.
15. The combination of these factors has led to the need for different levels of knowledge and skills compared to previous requirements. Realising this, the MAF will continue to embrace the concept of Knowledge Force (K-Force) that emphasises acquiring high-quality knowledge and cultivating a learning culture in the workforce. The Government will establish an expert pool (such as in cyber security) within the defence sector consisting of academics and professionals.
16. To cultivate professionalism among the MAF’s personnel, the Government will continue to engage and collaborate with prestigious universities and defence colleges around the world. Competent military personnel will be identified to further their studies in relevant fields on scholarships through the MAF Higher Learning Education Scheme to enhance their capabilities and competencies in their respective expertise. The MAF continuously encourages its personnel to pursue their studies at higher levels.
17. Based on the challenges of the uncertain security environment, the MAF’s dependence on systems and technology is ever increasing. The Government will continue to provide high quality training and education for the MAF personnel at all levels for the repurposing of individuals and organisations.
18. The Government will continue to strengthen its military training and education institutions through partnerships with accredited academic institutions to provide the best education in relevant fields. This is to ensure the MAF personnel are equipped with knowledge and skills needed in executing their tasks and responsibilities.
19. The National Centre for Defence Studies (*Pusat Pengajian Pertahanan Nasional*, PUSPAHANAS) which incorporates the Malaysian Armed Forces Staff College (MAFSC), Malaysian Armed Forces Defence College (MAFDC), as well as the National Resilience College (NRC) offers a variety of programmes in strategic and defence studies. The objective of PUSPAHANAS is to be a dynamic centre for research and education in strategic and military affairs through leadership development programmes to upgrade the professionalism of the MAF, as well as other relevant security and defence stakeholders.
20. The Government will develop a comprehensive transformation plan for the workforce to realise the MAF’s aspiration to become a more knowledgeable and professional force to meet future challenges. This plan will improve the MAF’s human resource management aimed at repurposing the existing force.
21. In view of this overall context, the opportunity for promotion would also be an incentive for career progression. Therefore, all personnel would be eligible for promotion in accordance with the due processes. Appropriate recognition will also be given to MAF personnel who demonstrates excellent performance.

Retention of MAF Personnel

22. The Government is committed to promoting the military as a career of choice with the aim to attract new talents and retain the existing highly skilled and talented personnel. In this regard, a career in the MAF must be sufficiently attractive to motivate and retain its personnel to serve for a longer period of time.

23. Retaining high quality and experienced military personnel is a major challenge to the Government as there is a high demand for people with technical, analytical and managerial skills in all employment sectors.
24. Considering all factors, a competitive salary structure is essential to retain the military personnel as it not only rewards their professionalism and experiences, but also recognises the complexity of the job. Apart from that, other privileges enjoyed by the MAF personnel include, but are not limited to:
 - i. Allowances, benefits and special incentives;
 - ii. Medical/healthcare benefits (access to both public and military health systems); and
 - iii. Housing facilities (provision of military quarters, as well as various housing programmes to fulfil the housing needs of MAF personnel).

Volunteer Forces

25. The Volunteer Forces consist of the Malaysian Territorial Army (*Rejimen Askar Wataniah, AW*), Royal Malaysian Naval Volunteer Reserve (*Pasukan Simpanan Sukarela Tentera Laut Diraja Malaysia, PSSTLDM*) and Royal Malaysian Air Force Volunteer Reserve (*Pasukan Simpanan Sukarela Tentera Udara Diraja Malaysia, PSSTUDM*) are made up of civilians.
26. The importance of the Volunteer Forces as outlined in the national defence policy, is that they would constitute a highly trained and motivated force that could be deployed during crisis and conflict. Thus, the Government will improve their operational capability and capacity to augment the Regular Forces.
27. The Volunteer Forces provide an essential link between the *rakyat* and military in reducing the value gaps between both sides. Through the presence of the Volunteer Forces in the community, the noble values of the MAF are shared with the *rakyat*, hence promoting better civil-military relations.
28. The Government remains committed to strengthening the primary roles and functions of the Volunteer Forces, which is to augment or mobilise with the Regular Forces during emergencies or war, or when required, and to assist the civil authorities during emergencies and disasters.
29. Apart from the existing roles, the Government is dedicated to enhancing the capabilities of the Volunteer Forces to mirror those of the Regular Forces in carrying out the following duties as defined in the Armed Forces Act 1972 (Act 77):
 - i. Ready to be mobilised and assume responsibility or as replacement to the Regular Forces when required;
 - ii. Assist and provide defences (including Low Level Air Defence or local defence in a sector) to important targets and installations, and critical points or zones; and
 - iii. Implement and provide immediate support in various areas such as reconnaissance, access control and anti-colonial activities.

30. The Volunteer Forces is a conducive platform to inculcate patriotism among the youths. Thus, the Government will step up measures to encourage the youths to join the Volunteer Forces including to constantly review the allowances structure. Concurrently, additional efforts will be undertaken to strengthen patriotism and increase diversity among the Volunteer Forces personnel.
31. The management of the Reserve Officer Training Unit (ROTU) will be reviewed to ensure that it is optimised to serve the wider national interests. The Government will also place more emphasis on the quality of the programme as well as increase the number of commissioned ROTU officers serving the Volunteer Forces.
32. The Government is determined to sustain and enhance the employers' support and commitment to the Volunteer Forces. Among the measures to be taken are strict enforcement and public awareness of the 1972 Armed Forces Act (Act 77) concerning employers' responsibilities.¹
33. The Volunteer Forces currently has expertise in signals and engineering, covering telecommunications, ports, water supply, electrical power and railway services. The Government will focus on new fields of expertise in specific areas such as satellite engineering, cyber security, systems integration, cloud computing and big data to respond to current and future threats.
34. The Government will continue to enhance the roles of the Volunteer Forces and RFR to meet current requirements. The Volunteer Forces and RFR are no longer considered as assets to be solely mobilised during conflicts, instead they are viewed as complementary and integral parts of the MAF.

The MAF Veterans

35. Veterans are brave and resilient individuals who have served in the MAF, risking their lives to protect and defend national security and sovereignty. Therefore, to honour the veterans for their courage and selfless sacrifices for the nation, the Government will continue to support their wellbeing.
36. The main focus of the Government is to improve the veterans' socio-economic well-being and assist them in getting their next career opportunities. The Government will provide consultation services and transition training to increase the marketability of veterans. The Government will also continue current collaborations and explore wider career opportunities for veterans.
37. The Government is aware of the importance of providing healthcare and social-related needs to the veterans. The provision of healthcare including financial support for haemodialysis treatment as well as medical treatment, medical equipment and other necessities will remain a top priority.
38. To ensure that the veterans' social needs and well-being are taken care of, the Government will continue its efforts to provide assistance related to the cost of living, schooling, tertiary education and emergencies. The Government will improve the service delivery system for veterans through collaborations with relevant parties.
39. At the same time, veterans can continue to play a role in contributing to the society and the nation by joining the Volunteer Forces after the completion of the RFR period or by sharing

¹ Section 201B and 201C of the Armed Forces Act 1972 (Act 77) which refers to an employer's responsibility.

their knowledge and expertise with the public and private sectors. The veterans can also play an important role in bridging the MAF and society, thus providing a better understanding of the military and national defence.

Civil Servants in Defence

40. Competent civil servants are the core of MINDEF. The civil servants have a wide range of responsibilities and significant roles in ensuring that the MAF could carry out its tasks in defending the nation. Civil servants of various levels are responsible for developing the national defence policy and other related defence development plans to achieve the Ministry's objectives. For this purpose, MINDEF's strategic plan is designed every five years as a base to implement the policies that have been developed.
41. To ensure the effective management of national defence, it is vital for capable and experienced civil servants to be placed in the defence and security cluster. Generally, civil servants can be placed in any ministry. However, the defence and security sector is unique. It needs to retain civil servants specifically from the Administrative and Diplomatic Service who have specialised knowledge and skills on the issue-areas that have been cultivated over a period of time. Therefore, the Government is determined to create a defence and security cluster to sustain institutional memory and ensure policy coherence.
42. In order to develop expertise within the defence and security cluster as well as to integrate the civil service with the MAF, the Government will provide training and courses in the field of strategic as well as defence and security studies, in addition to developing and establishing Subject Matter Experts through a comprehensive succession plan in the defence and security sector.
43. The Government will also give priority towards developing skilled civil servants in the fields of defence science, technology and industry to conduct R&D in defence related areas.
44. Civil servants are also exposed to challenging environments, high-intensity tasks and pressures while carrying out their duties and responsibilities. As such, the Government will continue to provide a conducive work ecosystem and ensure their well-being is taken care of. High-performing civilian defence personnel will be conferred appropriate recognitions and awards.

Participation of and by the *Rakyat*

45. This DWP emphasises defence as a shared responsibility; a comprehensive collective action that involves not only the whole-of-government but also the whole-of-society across the nation. **Collaboration between the *rakyat* and the defence workforce** reflects the whole-of-nation approach towards strengthening national defence.
46. Continuous participation of and by the *rakyat* in activities that raise the public's awareness on the importance of security and defence matters as well as grassroots programmes organised by civil society organisations, social groups and individuals, in addition to cooperation with defence and security agencies, will contribute directly to national defence.
47. Comprehensive Defence serves to support the implementation of the HANRUH concept or Total Defence, in terms of Security Readiness. Other aspects of HANRUH include Social Cohesion, Civil Preparedness, Economic Resilience, and Psychological Resilience.

This longstanding concept stresses that the responsibility of defending the country is not shouldered solely by the MAF and other security forces, but also by all segments of society from organisations to individuals.

48. Cyber resilience is a new element that needs to be emphasised in the implementation of HANRUH. While digital development provides new opportunities for Malaysia, it has also led to security threats through the cyber electromagnetic domain. In this regard, it is imperative to mitigate such security risks by developing cyber resilience efforts across the society.
49. Security readiness refers to the act and preparation to protect the country, citizens and national resources being spearheaded by MINDEF and the MAF. The MAF is also responsible to assist local authorities in enforcing the law, providing assistance during natural disasters and ensuring public order when required that will indirectly contribute to the nation building process.
50. The participation of and by the *rakyat* is important to achieve Comprehensive Defence. To achieve this, the consolidation of resources and efforts can be implemented among:
 - i. **Civil authorities.** Ensuring sufficient and effective infrastructure including transportation, logistics, communications and emergency supplies of critical items for the survival of the *rakyat*;
 - ii. **Private sectors.** Providing support in terms of services, products and expertise, as well as encouraging their employees to join the Volunteer Forces; and
 - iii. **Non-governmental organisations.** Support the nation by organising awareness campaigns and actively participating in exercises on emergency preparedness.
51. Comprehensive Defence, based on the shared identity concept, upholds the commitment of the DWP to achieve the following objectives:
 - i. Achieving sustainable internal resilience through the whole-of-nation approach;
 - ii. Improving inter-agency coordination through the whole-of-government approach; and
 - iii. Strengthening national unity through the whole-of-society approach.
52. The Government encourages all parties to be actively involved in raising security awareness and patriotism as well as fostering support for national defence through campaigns, promotions and advocacy at all levels of society.
53. The Government is determined to instil a security culture amongst the *rakyat* through Comprehensive Defence to enhance the nation's security readiness. The rise and fall of a nation is fully dependent on the unity, resilience and robustness of the *rakyat* in facing current and future threats. Hence, the cultivation of a security culture is important to ensure the preservation of national sovereignty.
54. *Hari Pahlawan* (Warrior's Day) is celebrated to commemorate the noble sacrifices made by our national heroes who gave their lives in defending our beloved nation. Thus, appropriate recognition shall be given to them for their heroic actions. The *rakyat* is encouraged to empathise and contribute individually, collectively or as an organisation towards the annual *Hari Pahlawan* celebration.

CHAPTER 6



INTERNATIONAL DEFENCE ENGAGEMENT

1. International defence engagement is an integral element of the DWP. It explores and expands Malaysia's **Credible Partnerships**, the third pillar of the national defence strategy.
2. Establishing and maintaining foreign relations that have been shaped through defence cooperation with other countries is a practice and tradition of MINDEF and the MAF. The partnerships serve Malaysia's defence interests by shaping a conducive external environment and security relations, boosting the nation's defence capacity building and strengthening ASEAN centrality for regional stability and prosperity.
3. This DWP adds a new level of activism and purpose to this traditional role by consolidating the existing partnerships while cultivating new ones. It sets forth a direction that continuously enhances the credibility of the nation's defence partnerships. This direction will boost defence cooperation transformation towards a more beneficial goal and maximise the nation's potential as a bridging linchpin between the Asia-Pacific and Indian Ocean regions. This, in turn, will further support other pillars of national defence strategy, namely Concentric Deterrence and Comprehensive Defence.
4. This chapter emphasises the National Defence Objective in achieving credible partnerships with other countries. It then elaborates on Malaysia's defence engagement at the bilateral and multilateral levels. It also addresses how the nation's multi-layered defence engagement that includes training, exercises, operations and other defence initiatives enhances the MAF's defence preparedness and regional security.

Goals of Credible Partnerships

5. The nation's defence partnerships are credible through two approaches. First, through active participation in various defence activities at regional and international levels. Second, by promoting and forging new defence partnerships that provide value to the nation, the Southeast Asian region and the broader international community.
6. The Government's goals in promoting a new level of Credible Partnerships are as follows:
 - i. Shaping Malaysia's defence relations with other countries;
 - ii. Managing shared security challenges;
 - iii. Fostering regional stability in accordance with international laws, conventions, rules and norms;
 - iv. Enhancing the MAF's capabilities and defence preparedness; and
 - v. Advancing Malaysia's position and interests in the international arena.

Scope and Levels of Defence Engagement

7. To achieve the goals of Credible Partnerships, the Government will continue to work with other countries to forge and strengthen defence ties at the strategic, operational and tactical levels. This will be carried out through scheduled meetings and other existing mechanisms bilaterally and multilaterally, including the conduct of training, exercises and military operations.

8. The Government will further deepen and widen these multi-layered engagements. Bilateralism and multilateralism will always go hand in hand. In this regard, bilateral defence cooperation will be continuously expanded and explored in ways that complement effective multilateral mechanisms, serving Malaysia's national interests. ASEAN and ASEAN-led mechanisms provide an essential platform for Malaysia to work closely with our neighbours and other international partners to address shared security challenges while pursuing common goals.

Bilateral Defence Engagement

9. The Government is committed to strengthening bilateral defence partnerships with countries in the Southeast Asian neighbourhood, the broader Asian region and the wider world.
10. Each bilateral partnership provides further opportunities for enhancing Malaysia's force preparedness, improving security resilience and expanding strategic space. The bilateral engagements cover a wide range of activities including institutionalised high-level committees on defence cooperation, sharing and exchanging information, defence and security discourse, border cooperation, exercises and joint operations, training and capacity building programmes, defence industry cooperation, procurement and transfer of military assets, as well as exchanges of visits.

Southeast Asia

11. The Southeast Asian region has always been the main factor influencing Malaysia's foreign policy. The Government will continue to develop strong, stable and comprehensive defence and security relations with all neighbouring countries in Southeast Asia.
12. Malaysia's bilateral ties with Southeast Asian countries have progressed and strengthened through two phases. The first phase was during the early decades of its independence when the world was still divided along the Cold War ideological lines. During this era, Malaysia's bilateral security cooperation in the region was concentrated on the immediate neighbours, the fellow founding member states of ASEAN, namely Indonesia, the Philippines, Singapore and Thailand. The second phase started after the 1990s when Malaysia gradually developed bilateral defence engagements with Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Vietnam.
13. The Government is committed to elevating Malaysia's bilateral defence cooperation with all Southeast Asian countries in the future. These bilateral collaborations are significant to Malaysia's defence and security interests as they provide essential channels to jointly combat shared security threats, particularly terrorism as well as other transboundary challenges.
14. Malaysia's close defence relationship with Brunei, formalised in 1992, is built on the shared history, common roots and culture as well as geographical proximity. Guided by the Joint Defence Working Committee (JDWC), the defence relationship has continued to develop at the strategic, operational and tactical levels through defence and security discourses, joint operations, exercises, training and exchanges of military personnel. Members of the Royal Brunei Armed Forces (RBAF) have been embedded in the Malaysian Contingent to the UNIFIL since 2008. Brunei has also joined the Malaysian-led International Monitoring Team (IMT) in Mindanao since 2004, to monitor the implementation of the agreement between the Government of the Philippines and the Moro Islamic Liberation Front (MILF), and to provide assistance in the socio-economic development of Mindanao.

15. Malaysia's defence ties with Indonesia, in which both countries share common history, cultural roots, land and maritime borders, is long-standing and strong. Bilateral defence relations can be traced back to 1972 when the countries initiated the General Border Committee (GBC) to govern the implementation of activities along the common borders. The defence cooperation has broadened through frequent exchanges of visits and military personnel, combined exercises and operations, joint military training and participation in defence exhibitions. The mechanisms for sharing and exchanging information between the two countries have increased from tactical to strategic level, with countering terrorism and maintaining peace as the main focus of this joint effort. The Government aspires to further strengthen the existing relationship through a more comprehensive defence cooperation instrument that covers various aspects, including the defence industry.
16. Defence relations with the Philippines was formalised by the signing of the Memorandum of Understanding (MoU) on Defence Cooperation in 1994, which established the Combined Committee on Defence Cooperation (CCDC) that oversees the defence cooperation ranging from military training and exercises, courses, exchanges of visits and military personnel, and defence industry cooperation. The two countries have also enhanced cooperation in maritime security, border control and non-traditional security areas, especially through sharing and exchanges of intelligence to address the piracy and militant threats in the east coast of Sabah and the southern Philippines. The establishment of the Trilateral Intelligence Exchange (INTELEX) among Indonesia, Malaysia and the Philippines in 2017 has also provided a platform for more active information sharing and exchange among the three countries.
17. As neighbours who share the same historical roots, Malaysia and Singapore have maintained professional and cordial defence relations. Bilateral defence engagement revolves around combined training and exercises, exchanges of visits and military personnel, strategic discourse and participation in defence exhibitions. Defence relationship between both countries is mainly undertaken under the ambit of FPDA, ADMM and ADMM-Plus.
18. Based on shared interests in promoting stable borders and common regional interests, Malaysia and Thailand have enjoyed a relationship that is based on confidence and trust between the two countries. The defence relations with Thailand can be traced back to the establishment of the GBC in 1965. The GBC is an annual platform where both sides confer on measures to maintain security along their common border. In addition to military training, exercises and operations, exchanges of visits and military personnel, the bilateral defence partnership is also featured by the conduct of Coordinated Maritime Patrol (CMP) and Joint Border Patrol (JBP) operations. The patrol operations aim to combat transnational crimes, such as smuggling activities and human trafficking.
19. Despite the relatively late starting point compared to other ASEAN countries, Malaysia's defence engagements with Cambodia, Lao PDR, Myanmar and Vietnam have progressed steadily since the 1990s. Malaysia will continue to offer training and courses to military personnel from these countries in the future.
20. Malaysia-Cambodia defence cooperation began with the signing of a Letter of Intent on Defence Cooperation in 2015, which spells out, among others, the enhancement of defence cooperation through more active military training and exchanges of personnel. Malaysia has also signed an MoU with Lao PDR in March 2019 to further improve the existing bilateral defence ties. Malaysia and Myanmar have embarked on collaboration through military training and exchanges of visits. Malaysia is also exploring to enhance its defence cooperation with Timor-Leste.

21. A strong and comprehensive relationship with Vietnam is important to Malaysia. The Government will continue to develop defence cooperation with Vietnam, based on the MoU on Defence Cooperation that was formalised in 2008. Both countries have demonstrated a commitment to forge a stronger partnership and elevate it to a strategic level by establishing the High-Level Committee (HLC) on Defence Cooperation. Among the major areas of cooperation identified are strategic affairs, military cooperation, maritime security, defence industry and non-traditional security.

The Asian Region

22. Malaysia is also committed to enhance bilateral defence relations with countries in other parts of the Asian region, including East Asia, South Asia and West Asia.
23. Malaysia's relations with China have been shaped by long historical links, tracing back to the Malacca Sultanate and the Ming Dynasty in the 15th century. Malaysia was the first ASEAN member to establish diplomatic relations with China in 1974. Malaysia played an instrumental role in engaging and bringing China into the ASEAN-led dialogue process in the post-Cold War era. The MoU on defence cooperation was signed in 2005 and subsequently renewed in 2016, which translated into increased activities between both countries including military training and exercises. Both countries also signed the Framework of Cooperation between the Ministry of Defence Malaysia and the State Administration of Science, Technology and Industry for National Defence of the People's Republic of China (SASTIND) on Joint Development and Construction of Littoral Mission Ships for the Royal Malaysian Navy in the same year. The upgrading of the bilateral defence relations ties is in line with the introduction of the Comprehensive Strategic Partnership (CSP) initiative in October 2013 between Malaysia and China. Malaysia and China have established a forum to share and exchange information on various security topics. Both countries will continue to promote constructive defence cooperation through productive confidence-building measures and elevation of the current defence cooperation to the strategic level.
24. Malaysia's relation with Japan is strong and mutually beneficial. Malaysia welcomes Japan's active and constructive role in regional affairs which includes defence. The first bilateral discussion on defence cooperation was held in 1999. Malaysia-Japan defence engagement is realised through continuous exchanges of visits, training as well as sharing and exchanges of information. In September 2018, Malaysia and Japan signed the MoU on Defence Cooperation, which encompasses defence equipment and technologies, exchanges of personnel, joint maritime security and disaster relief operations. Both sides also inked the Agreement between the Government of Malaysia and the Government of Japan Concerning the Transfer of Defence Equipment and Technology in the same year. Japan and Malaysia have forged close cooperation on a wide array of security aspects, ranging from HADR, counter-terrorism to PKOs. Based on this strong foundation, the Government will continue to enhance bilateral defence cooperation by exploring potential collaboration in capacity building in defence science and technology, including education, research and development, as well as the transfer of defence equipment and technology.
25. Malaysia's defence cooperation with the Republic of Korea takes the forms of procurements, training, exchanges of visits as well as sharing and exchanges of information. Malaysia foresees prospects with the Republic of Korea in defence capability building in the future. Therefore, the two sides have also agreed to bolster cooperation in the field of defence industry formally through defence cooperation instruments.

26. Malaysia enjoys friendly defence ties with Bangladesh. Bilateral defence ties have been strengthened following the operationalisation of Malaysia's Field Hospital that has provided humanitarian assistance to the Rohingya refugees in Cox's Bazar since 2017.
27. Malaysia's close defence relations with India, formalised in 1993 is defined through the Malaysia-India Defence Cooperation Meeting (MIDCOM) that focuses on defence activities at all levels including defence science, technology and industry. This cooperation is important as both countries share similar defence assets that boosts interoperability between both forces. In 2018, Malaysia and India signed an MoU between the Government of Malaysia and the Government of India on United Nations Peacekeeping Cooperation to exchange information and experience in peacekeeping operations.
28. Malaysia's close defence ties with Pakistan were formally established in 1997 with the signing of MoU on Defence Cooperation. The MoU outlines a Joint Committee on Defence Cooperation (JCDC), which emphasises on bilateral military cooperation as well as cooperation in the field of defence science, technology and industry.
29. In West Asia, Malaysia has maintained strong bilateral defence relations with several countries, including Iran, Qatar, Saudi Arabia, Turkey and the United Arab Emirates (UAE). The Government is exploring the possibility of expanding defence cooperation with other countries in the region.
30. Malaysia's bilateral defence engagement with Saudi Arabia focuses on counter-terrorism and extremism, exchanges of personnel and capacity building in defence science, technology and industry. Both countries formalised their cooperation in 2016 through the MoU on Technical Defence Industry Cooperation and held the first Joint Committee Meeting on Defence Industry. The cooperation between Malaysia and the UAE started in 2013 through an MoU on Defence Cooperation, followed by the second MoU (revised) in 2014. The focus of cooperation includes military training that involves all three Services, Malaysian Peacekeeping Centre (MPC) and the MAF's Department of Health Services. Malaysia has been interacting with Iran since 1993 to look into potential areas of cooperation in defence science and technology. Malaysia and Qatar signed a Letter of Intent in 2017 to explore potential defence cooperation in the field of military-to-military activities as well as defence science, technology and industry.
31. Malaysia has elevated its defence relations with Turkey to the strategic level and is committed to augmenting defence relations, especially on defence science, technology and industry. Since Turkey is one of Malaysia's main partners in the development of defence capabilities, both countries will continue to explore ways of widening defence cooperation between the industry players in all domains. To achieve this goal, Malaysia and Turkey will provide a conducive environment to encourage collaboration between both countries' defence industry players.

The Wider World

32. Beyond Asia, Malaysia has a strong foundation of long-standing defence partnerships with several extra-regional countries, including Australia, France, New Zealand, Russia, the United Kingdom (UK) and the US. These countries have been Malaysia's defence partners since independence until now. Malaysia is committed to strengthening the existing engagements and welcoming new ones to support its national interests.

33. Bilateral defence ties between Malaysia and Australia are robust and long-standing. It started with the stationing of Australian troops in Malaya and Borneo that were involved in battles during World War II. The Australian Armed Forces helped to fight against the communist terrorists throughout the Malayan Emergency and aided Malaysia during the *Konfrontasi*. The defence partnership between Malaysia and Australia has continued to develop under the auspices of the FPDA that started in 1971. At present day, the defence relationship has developed further since the signing of the Malaysia-Australia Joint Defence Programme (MAJDP) in 1992.
34. In 2017, the MAJDP Policy Talks was elevated to the HLC that convenes annually to discuss strategic issues. This partnership is strengthened by a wide array of programmes and activities that range from military exercises, exchanges of visits and military personnel, PKO training, sharing and exchanges of information as well as capacity building, particularly under the Defence Cooperation Scholarship Programme (DCSP). This robust relationship was also evident in the strong commitment of Australia in the joint search operation for the missing flight MH370 in 2014 in the southern Indian Ocean. Australia will continue to be an important defence partner for Malaysia.
35. Malaysia and France have maintained a robust defence partnership since 1993, through an MoU that covers military activities as well as defence, science, technology and industry. Consequently, the Defence Joint High Strategic Committee (DJHSC) was established as the main avenue for bilateral defence and strategic dialogue to formulate, manage and monitor the implementation of the bilateral cooperation. France, one of the major suppliers of Malaysia's defence assets and technology, has contributed significantly to the offset programmes particularly in capacity building and the transfer of technology. Both countries have also widened defence cooperation on cyber security, counter-terrorism and PKOs. Malaysia will also continue to forge defence relationships with other European nations such as Germany, Italy, Norway, Sweden and other countries of interest.
36. Defence cooperation with New Zealand began in 1971 through the FPDA. The relationship between both countries was further strengthened through a bilateral arrangement in 1996. The Malaysia-New Zealand Senior Executives' Meeting (MNZSEM) is the highest level of meeting overseeing the bilateral defence cooperation that includes military training and exercises, exchanges of personnel as well as the sharing and exchanges of information. New Zealand also played an important role in the fight against the communist terrorists throughout the Malayan Emergency and aided Malaysia during the *Konfrontasi*.
37. Malaysia shares strong defence cooperation with Russia, an important partner in defence capability building and defence industry. Based on the strong foundation of the 1999 MoU on Defence Cooperation, Defence Industry and Technology, the Government commenced bilateral defence cooperation through the establishment of a Joint Intergovernmental Commission on Cooperation (JICC) as a platform to discuss cooperation, especially in the field of defence industry. In addition, both sides are committed to further explore new fields such as cyber security, counter-terrorism, aerospace and capacity building, besides sharing and exchanges of information.
38. The UK played a very important role in shaping Malaysia's defence system. The UK was involved in defending Malaysia during World War II, Malayan Emergency and also *Konfrontasi*. In 1998, both countries signed an MoU on defence cooperation for promoting military activities at all levels, capability and capacity building as well as defence science, technology and industry. Both countries demonstrated a commitment to a stronger partnership by establishing the HLC on Defence Cooperation in 2017 and to widen cooperation, especially in the field of cyber security.

39. Malaysia's defence partnership with the US is long-standing and comprehensive. The US has been one of Malaysia's key partners in the economic and defence sectors. Bilateral defence ties were institutionalised in 1984 through the establishment of the Bilateral Training and Consultative Group (BITACG) to coordinate military activities between the two countries which include training, courses and military exercises. The two countries have also established a strategic consultation forum, the Malaysia-US Strategic Talks (MUSST). Among the areas of cooperation are in counter-terrorism, maritime security, HADR, cyber security, sharing and exchanges of information, defence capability building and defence industry. Currently, the defence relationship is empowered through the Building Partner Capacity Program (BPC) which involves the MAF and other security agencies. Malaysia is committed to strengthening defence cooperation with the US in the future.
40. Malaysia has also developed bilateral defence engagements with a number of Pacific countries, including Fiji and Papua New Guinea. The Republic of Fiji Armed Forces had served in Malaya under the British during the First Emergency. Malaysia will give priority to the development of capacity and defence industry as a basis to mould defence cooperation with other countries in the future.

Multilateral Defence Engagements

41. The Government is committed to multilateralism at both regional and global levels. Malaysia will continue to give full commitment to multilateral institutions that provide an indispensable platform to mitigate power inequality among sovereign states, institutionalise norms, as well as protect national interests and uphold Malaysia's position internationally.

ASEAN and ASEAN-led Mechanisms

42. A strong and united ASEAN is at the core of Malaysia's security and defence resilience. This solidarity is the foundation for ASEAN centrality and the key for Southeast Asia to play a central role in regional affairs.
43. The Government will continue to embrace ASEAN and all ASEAN-led mechanisms as the critical platforms to pursue security and other interests, including ensuring regional peace, security and stability. These ASEAN-led mechanisms are the ASEAN Regional Forum (ARF), ASEAN Plus Three (APT), East Asia Summit (EAS), ASEAN Defence Ministers' Meeting (ADMM) and ADMM-Plus.
44. At the ASEAN level, Malaysia together with nine other Southeast Asian neighbours have over the decades actively initiated, developed and leveraged on a web of institutionalised cooperative mechanisms to achieve common interests and manage shared challenges among them. These mechanisms serve a number of functions: forging dialogue and confidence building measures, pursuing collective actions, enhancing capacity building, deepening group cohesion and managing NTS challenges.
45. An example in point is the sharing and exchange of high-level information with all Southeast Asian armed forces through the Intelligence Exchange (INTELEX) Seminar and Analyst-to-Analyst Exchange (ATAX).

46. Decades of gradual but progressive institutionalised cooperation through ASEAN and ASEAN-led mechanisms have promoted regular dialogues, strengthened collective diplomatic actions, contributed to regional interdependence and to an extent, deepened geopolitical affinity among ASEAN Member States (AMS). These relationships mark the efforts to strengthen the solidarity among regional countries, as well as fostering the development of an ASEAN community. Although ASEAN possesses limited capabilities to solve issues faced by its members, nonetheless many important issues, such as the trans-boundary challenges have been resolved successfully through the ASEAN platform.
47. The ADMM, inaugurated in Kuala Lumpur in May 2006, is the highest defence consultative and cooperative mechanism in ASEAN. It promotes mutual trust and confidence through a greater understanding of defence and security challenges, as well as enhancement of transparency and openness. Additionally, the ADMM Retreat provides an opportunity and space for ASEAN Defence Ministers to further strengthen and deepen ASEAN Member States' relations and defence cooperation in a cordial manner. On the other hand, the ASEAN Chiefs of Defence Forces Meeting (ACDFM) and its related meetings are the mechanisms among the militaries of ASEAN Member States to discuss issues of common concern. Among the ASEAN-wide defence cooperation are the ASEAN Militaries Ready Group on HADR (AMRG on HADR), ASEAN Defence Industry Collaboration (ADIC), ASEAN Direct Communications Infrastructure (ADI) and ASEAN Peacekeeping Centres Network (APCN) that allow ASEAN Member States to more effectively tackle common threats, in pursuit of regional peace, stability and prosperity.
48. The AMRG on HADR is a Malaysia-led initiative that aims to prepare ASEAN military teams for deployment to areas of crises in a quick and coordinated manner. ASEAN fully supports the attachment of military officials at the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) to coordinate the flow of information and the AMRG on HADR team on site. The operationalisation of AMRG on HADR is realised through a Standard Operating Procedure (SOP) jointly developed by ASEAN Member States, its Dialogue Partners and international organisations.
49. The ADMM-Plus, inaugurated in Hanoi in October 2010, is a platform for ASEAN and its eight Dialogue Partners (Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and the US) to strengthen security and defence cooperation. Experts' Working Groups (EWGs) have been established to facilitate areas of practical cooperation which are maritime security, counter-terrorism, HADR, PKOs, military medicine, humanitarian mine action and cyber security.
50. Beyond the ADMM and ADMM-Plus, the Government is also committed to further enhance Malaysia's active participation in other ASEAN-led mechanisms including the ARF processes, such as the ARF Defence Officials' Dialogue (ARF DOD) and the ARF Security Policy Conference (ASPC).

Sub-regional Cooperation

51. Malaysia will continue to play a pivotal role in several security cooperative arrangements that are undertaken at the sub-regional level, including the MSP and the TCA.
52. The MSP initiative is a mechanism started by Indonesia, Malaysia and Singapore in 2004 and joined by Thailand in 2006, to counter sea robbery and piracy. The MSP comprises of several joint operations, namely the Intelligence Exchange Group (IEG), the Malacca Straits Sea Patrol (MSSP), as well as the Eyes in the Sky (EiS). The IEG serves to support the sea and air patrols

through intelligence and information sharing between the participating countries. The MSSP entails coordinated maritime patrols and information sharing between ships and their respective maritime operation centres. The EiS involves the conduct of joint maritime air patrol with Combined Mission Patrol Team (CMPT) over the straits to reinforce maritime patrols through air surveillance. The collaboration among the littoral states has been a success, as evidenced by the decline of piracy and armed robbery incidents in the Malacca Straits since the initiative was implemented.

53. Malaysia remains committed to developing the capabilities and functions of the TCA, an initiative to address the common maritime security threats, specifically Kidnap-for-Ransom (KFR), sea robbery and terrorism incidents in the Sulu and Sulawesi Seas. Under the 2016 Framework on TCA, the three littoral countries, Indonesia, Malaysia and the Philippines agreed to establish collaboration on Maritime Command Centres (MCC), Trilateral Maritime Patrol (TMP), Trilateral Air Patrol (TAP) and Intelligence Working Group (IWG). Through the TCA, the three countries have established a transit corridor for ships and allowed the conduct of hot pursuit beyond maritime borders. Malaysia has also placed two forward sea bases, Kapal Auxiliary Tun Azizan and Pangkalan Laut Tun Sharifah Rodziah to strengthen the maritime defence in the area.

Five Power Defence Arrangements (FPDA)

54. Malaysia remains committed to the FPDA. The consultative mechanism, established in 1971 which involves Australia, Malaysia, New Zealand, Singapore and the UK, has contributed significantly to national defence. In addition to improving the knowledge, skills and professionalism of the military personnel, the FPDA has also enhanced the MAF's defence capability and preparedness. The FPDA was founded to prepare for conventional warfare through developing doctrine as well as conducting scheduled military training and exercises to increase interoperability among member nations. Currently, the FPDA is exploring ways to enhance cooperation in the non-traditional sphere such as maritime security, counter terrorism, HADR and also cyber security to remain relevant in line with the FPDA's three main principles.¹ The Headquarters Integrated Area Defence System (HQIADS), in Butterworth, is the permanent operational element of FPDA. Efforts to build confidence building measures for the FPDA are currently being intensified through the observers' programme.

Contributions and Engagement at the International Level

55. Malaysia reaffirms its long-standing commitment to further enhance its global involvements and contributions towards international peace. Malaysia's active contributions to international PKOs and its participation at the United Nations Security Council (UNSC) as a Non-Permanent Member are well recognised. Malaysia has participated in numerous PKOs since 1960 until today, including a battalion at UNIFIL in Lebanon, as well as Staff and Observers in a few countries in Africa.
56. Malaysia will continue its efforts to enhance the capacity of the MAF peacekeeping troops, including improving the interoperability of peacekeepers among nations. Malaysia welcomes contributions and opportunities for wider partnerships to further strengthen the role of the MPC, the first of its kind, a multi-dimensional PKO training centre in the region.

¹FPDA's three main principles are: (1) as a defensive arrangement, the FPDA should maintain a non-threatening posture to avoid rousing sensitivities; (2) the FPDA should proceed at a pace comfortable to all its members with due cognisance to multilateral, bilateral and national sensitivities; and (3) the FPDA should continually develop and evolve to remain relevant.

57. Malaysia reaffirms its commitment to participate in missions led by international organisations, such as the IMT in Mindanao, The Philippines since 2004. Malaysia has also collaborated with international organisations, especially on HADR missions. Since 2010, Malaysia has partnered with the WFP in hosting the UNHRD at Subang Airbase. The depot, the first of such hubs by WFP in Southeast Asia to deliver humanitarian relief items within 48 hours of a crisis, provides storage, logistics support and services to the UN as well as other international humanitarian agencies in the Asian region. This depot is also home to the DELSA, a mechanism to deliver humanitarian assistance systematically under the coordination of the AHA Centre.
58. Malaysia is currently working with the International Federation of Red Cross and Red Crescent Societies (IFRC) in the area of HADR. Besides that, Malaysia is also collaborating with the International Committee of the Red Cross (ICRC) to strengthen the application of International Humanitarian Law (IHL).
59. Malaysia's first delivery of aid for the Rohingya refugees in Bangladesh was sent in September 2017, using the RMAF's A400M aircraft. Malaysia is also operating the MFH in Cox's Bazar on the basis of humanity and the Responsibility to Protect (R2P). A team of 56 medical personnel provides medical services, dental care, maternity, plastic surgery, intensive care, counselling and trauma consultation at the MFH. Since March 2018, the MFH has treated approximately 83,000 cases and operated on 2,300 patients within 18 months of its operation. Through the operationalisation of the MFH, Malaysia has received offers and assistance, among others, from Brunei Darussalam, Saudi Arabia and the UAE.
60. Malaysia remains concerned about humanitarian issues and deeply appreciates the support of other nations especially within the ASEAN community concerning HADR.
61. Malaysia will continue to play a leading role in promoting more credible partnerships among Muslim countries such as Indonesia, Pakistan, Qatar and Turkey, by focusing on defence science, technology and industry.



Future Direction of Defence Engagement

62. The international defence engagements discussed above constitute layers of Credible Partnerships that complement other national defence efforts while augmenting Malaysia's defence capability development. Malaysia will also emphasise on the development of defence capacity as well as defence science, technology and industry while embarking on more defence cooperation with other nations in the future.
63. In the context of the Southeast Asian region, Malaysia will continue to prioritise defence cooperation with regional nations while being more proactive in advancing Malaysia's leadership role in regional security and defence issues. Malaysia will also explore defence cooperation with extra-regional states while simultaneously elevating existing defence cooperation to a more enhanced strategic partnerships in accordance to the Activist Neutrality principle.
64. Malaysia will continue to position itself as an exemplary multi-ethnic country with Muslim majority that is inclusive, developed and progressive by developing stronger defence cooperation with other countries through collaboration in the areas of common interest while upholding the concepts of *Rahmatan lil 'alamin* (Mercy to all) and *Maqasid Syari'ah* (objectives of the *syariah*).
65. Malaysia's future defence engagement will be further developed upon needs and comparative advantages. That is, all enduring and emerging partnerships would be forged based on Malaysia's current and long-term security needs. Malaysia's bridging, building and binding roles will continue to strengthen the Credible Partnerships in ways that complement each other, achieving the National Defence Vision while contributing to regional stability and global peace.

PARTICIPATION OF MAF IN UN PEACEKEEPING OPERATIONS AND OTHER INTERNATIONAL ORGANISATIONS' MISSIONS

Iran/Iraq (UNIIMOG) 1988-1991
Iraq/Kuwait (UNIKOM) 1991-2003
Bosnia Herzegovina (UNFROFOR) 1992-1995
Bosnia Herzegovina (UNMIBH) 1995-1996
Bosnia Herzegovina (NATO-IFOR) 1995-1996
Bosnia Herzegovina (NATO-SFOR) 1996-1998
Kosovo (UNMIK) 1999-2007
Lebanon (UNIFIL) 2007-now

Tajikistan (UNMOT) 1994-2000

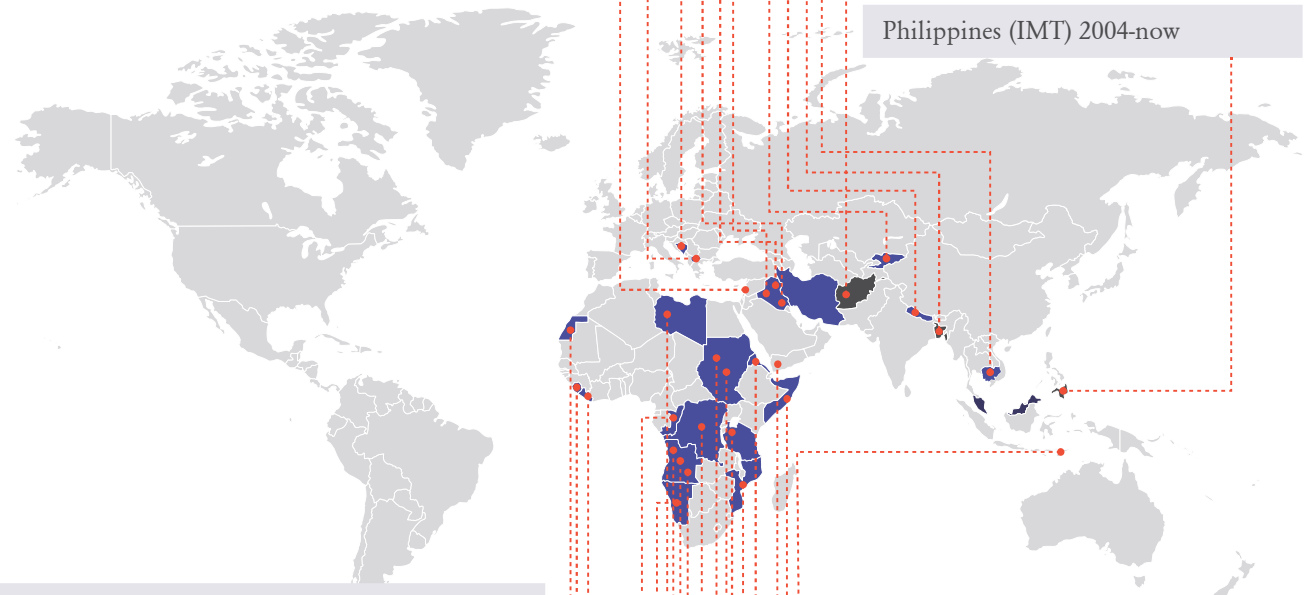
Afghanistan (MALMED TEAM) 2002
Afghanistan (ISAF-Med) 2011-2014

Nepal (UNMIN) 2007-2011

Bangladesh (Malaysia Field Hospital)
2017-now

Cambodia (UNAMIC) 1991-1992
Cambodia (UNTAC) 1992-1993

Philippines (IMT) 2004-now



Republic Congo (ONOC) 1960-1964
Namibia (UNTAG) 1989-1990
West Sahara (MINURSO) 1991-now
Angola (UNAVEM II) 1991-1995
Angola (UNAVEM III) 1995-1997
Angola (MONUA) 1997-1999
Mozambique (ONUMOZ) 1992-1994
Somalia (UNOSOM II) 1993-1995
Liberia (UNOMIL) 1993-1997
Liberia (UNMIL) 2003-now
Republic of Chad (UNASOG) 1994
Sierra Leone (UNOMSIL) 1998-1999
Sierra Leone (UNAMSIL) 1999-2005
Republic of Congo (MONUSCO) 1999-now
Ethiopia-Eritrea (UNMEE) 2000-2008
Burundi (ONUB) 2004-2006
Sudan (UNMIS) 2005-2011
Darfur, Sudan (UNAMID) 2007-now
South Sudan (UNISFA) 2011-now

Yemen (UNMHA) 2019-now

East Timor (INTERFET) 1999-2002
East Timor (UNTAET) 1999-2002
Timor Leste (UNMISSET) 2002-2005
Timor Leste (UNMIT) 2006-2012

Legend

UN PKOs

Other Missions

SECTION 3

IMPLEMENTATION

CHAPTER 7



DEFENCE SCIENCE, TECHNOLOGY AND INDUSTRY

1. Defence science, technology and industry form a strategic component of Malaysia's defence ecosystem to support the three pillars of the national defence strategy. The origins of the Malaysian defence science, technology and industry establishment can be traced back to the early 1970s. Since then, several Malaysian defence companies have developed capabilities that have made them competitive players in Maintenance, Repair and Overhaul (MRO). This also includes the manufacturing and catering to the supply-chain requirements of Original Equipment Manufacturers (OEMs).
2. Despite steady advances in Malaysia's defence industry, the Government believes that there is still significant room for growth and improvement. The Government's long-term vision in this context is for local players to develop the capacity to design, test, develop and market state-of-the-art weapons and technologies, both for domestic and export markets in line with the Aspired Self-Reliance principle. The Government will continue to support the productivity, profitability and sustainability of the defence science, technology and industry establishment.
3. A well-developed defence science, technology and industry will contribute towards economic growth by minimising dependency on foreign defence assets, expanding and commercialising products for civilian usage, driving research and innovation as well as generating job opportunities for the *rakyat*, especially among the graduates in the related fields.
4. The DWP presents a new approach towards Malaysia's defence science, technology and industry policy by presenting it as a catalyst for Malaysia's defence ecosystem and economic growth. This approach is the main key towards stimulating the nation's R&D foundation, synergising industrial and inter-agency resilience, as well as strengthening its overall defence capabilities.
5. The Government will strengthen existing initiatives by formulating a National Defence Industry Policy (NDIP) that will serve as a guideline for the development of this sector. This policy encompasses strategies for enhancing research in defence science and technology, capacity building and funding to boost the growth of the local defence industry.
6. The role and participation of the main defence science, technology and industry players will be highlighted in the five key thrusts of the NDIP. The five key thrusts form a policy framework aimed at cultivating long-term favourable conditions to unleash the defence industry's full potential.
7. The NDIP will also provide the requisite impetus and coherent policy guidelines for enhancing the capacity of local defence science, technology and industry. In addition, the NDIP will contribute towards economic growth in the long run.
8. The Government will invest in developing the nation's defence science, technology and industry along the following approaches:
 - i. **Stimulating research and development.** Developing focused capabilities in defence science, technology and industry based on R&D across critical technology sectors;
 - ii. **Encouraging economic spillover contributions to the nation.** Benefits from defence science, technology and industry are anticipated to spillover to other economic sectors, thereby serving as one of the drivers for the nation's economic growth; and

- iii. **Fulfilling the nation's defence needs.** The defence science, technology and industry establishment equips 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 pursuit of self-reliance on selected niche areas. A vibrant local defence industry is essential for the realisation of sustainable self-reliance in producing critical assets and defence equipment.

Key Contributors of Defence Science, Technology and Industry

9. The primary drivers in this sector are MINDEF, primarily the Science and Technology Research Institute for Defence (STRIDE) and the Defence Industry Division (DID), the MAF, as well as other related ministries and agencies.
10. The industry players in this sector are the well-established local companies, including multinational companies related to defence science, technology and industry, small and medium enterprises (SMEs) and small start-ups that are linked together under the Malaysian Industry Council for Defence, Enforcement and Security (MIDES).
11. Malaysia's defence science, technology and industry are also supported by a research community with the expertise to design, develop and test assets and equipment for defence and security. The community consists of various public and private universities such as the National Defence University of Malaysia (*Universiti Pertahanan Nasional Malaysia*, UPNM), research institutes and centres, as well as private inventors creating platforms for self-reliance.

The Government's Support for Defence Science, Technology and Industry

12. The ability of the MAF to pursue the National Defence Framework requires the full support of Malaysia's defence industry in order to equip and sustain its capabilities during peacetime or conflict. The local defence industry must also support other security and enforcement agencies involved in national defence.
13. Emphasis will be given to self-reliance on selected niche areas including provision of critical assets, equipment and services such as basic combat equipment for the smart soldier of the Future Force (small arms, ammunition, electronic communication systems, bulletproof vests, webbings, ballistic helmets, combat dress and rations) and MRO of main assets and equipment for the MAF, as well as other related agencies.
14. The Government acknowledges the challenges faced by industry players in performing R&D. Hence, there will be initiatives from the Government to support R&D and innovation costs for potential industry players. This includes the Government's initiatives to assist in promoting their products to the local and international market. Ultimately, these initiatives are aimed towards achieving self-reliance in the long run.
15. The defence industry needs to evolve to remain competitive and not solely depend on government procurement contracts. Therefore, new initiatives will be implemented to drive the industry to be a sustainable economic sector through targeted investments in the nation's defence and security sectors. A dynamic and competitive local defence industry will be a catalyst for economic growth.

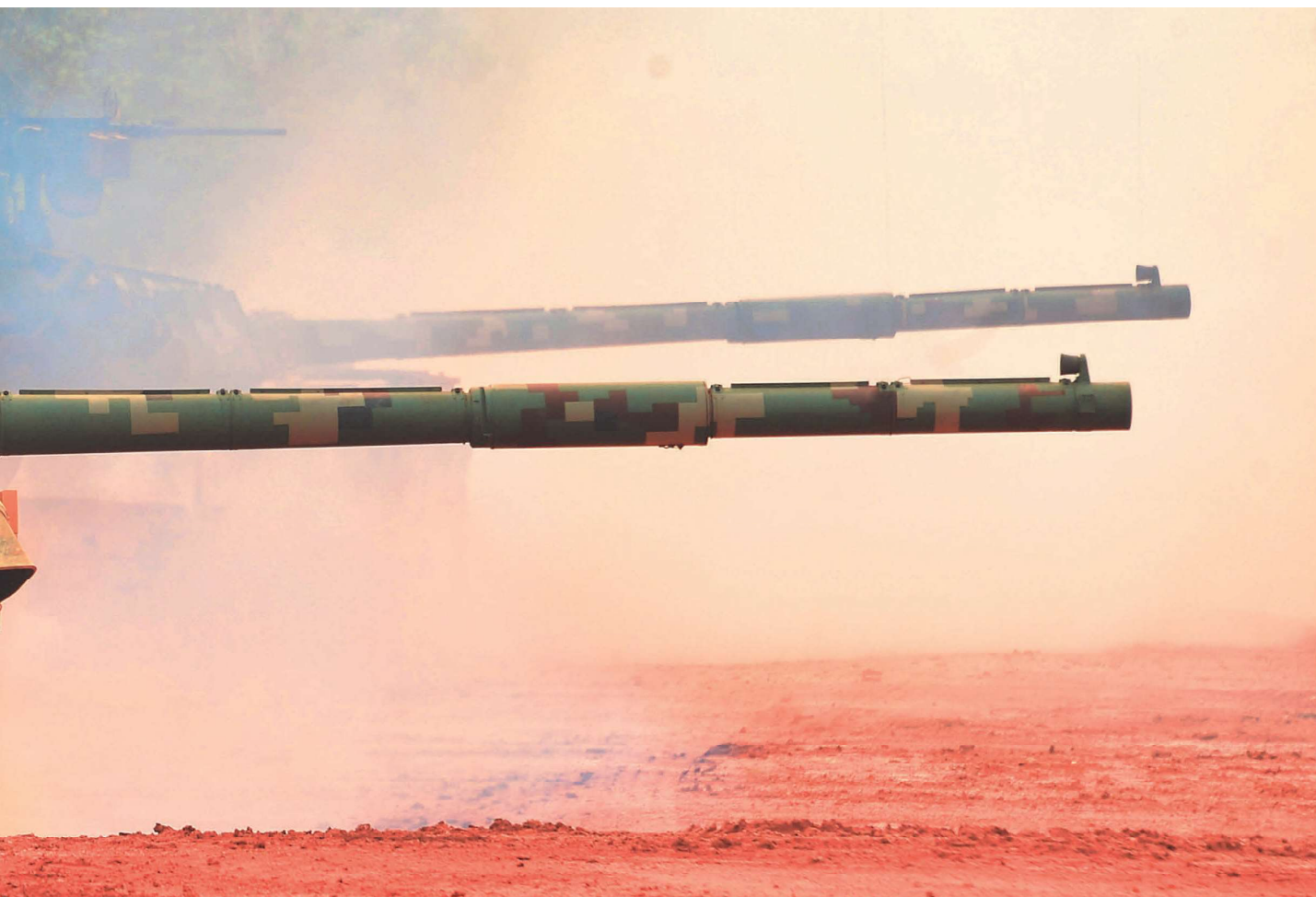
16. Given the significant costs associated with defence procurement, awarding procurement contracts to the local defence industry will stimulate the domestic economy while minimising the outflow of the Ringgit. The defence industry will also be encouraged to take advantage of other opportunities available in export markets, for example, developing local capability for aircraft MRO to become an aerospace hub in Southeast Asia. It is worth noting that ASEAN Member States collectively spend approximately USD30 billion annually on their defence requirements. A well-developed Malaysian defence science, technology and industry will provide opportunities for Malaysia to tap into the ASEAN market.

Framework for the National Defence Industry Policy (NDIP)

17. The NDIP presents the way forward via the following five key thrusts:
 - i. **Thrust 1: Human Capital Development.** Promoting various initiatives to produce experts with the right skills and knowledge in line with the needs of the defence industry;
 - ii. **Thrust 2: Technology Development.** Providing funding for scientific research, application and innovation, acquiring critical technologies to strengthen local R&D capabilities and transfer of technology from foreign strategic partners;
 - iii. **Thrust 3: Industrial Development.** Implementing new defence asset procurement policies based on cost-benefit analysis and economic indicators; revitalising specific defence sectoral classification guidelines; reviewing tailored incentives to support local companies to improve industrial competitiveness and developing national strategic projects;
 - iv. **Thrust 4: Towards Self-Reliance.** Prioritising the products developed and manufactured by capable local companies, re-energising Industrial Collaboration Programme (ICP) with OEM as well as benefiting from the know-hows on niche products and markets; and
 - v. **Thrust 5: Penetrating the Global Market.** Encouraging local companies to promote their products and eventually penetrate international markets through collaboration with other Government agencies and the private sector, as well as participation in international defence exhibitions.
18. The Government's five thrusts will be operationalised through five initiatives as follows:
 - i. **Initiative 1:** Enhancing the economic strategic framework for defence science, technology and industry, focusing on niche sectors;
 - ii. **Initiative 2:** Restructuring organisations related to the defence industry;
 - iii. **Initiative 3:** Establishing a Defence and Security Investment Committee;
 - iv. **Initiative 4:** Stimulating R&D and innovation through sustainable funding; and
 - v. **Initiative 5:** Strengthening talent development programmes.



19. **Enhancing the Economic Strategic Framework for Defence Science, Technology and Industry Players and Focusing on Niche Sectors.** Malaysia has several established local defence science, technology and industry players that produce common user items (basic soldiering equipment), maritime, automotive, aerospace, ICT and weaponry. These clusters will be strengthened in order for the industry players to be more capable and emerge as renowned suppliers of equipment and services for domestic as well as international markets.
20. Malaysia's key defence industry players are encouraged to embrace the latest IR 4.0 technologies such as AI, in their products and manufacturing systems to maximise automation, precision in manufacturing and cost-savings. This is in line with the requirement of new assets and equipment for the MAF, such as unmanned systems and smart weapons.
21. The key defence industry players are also encouraged to develop multi-user products spanning the needs of the military, other government agencies and the commercial sectors. Examples of multi-user products are vehicles, ships and boats, computer hardware and software, electronic equipment and communication systems.
22. The Government's aspiration is for the MAF and security agencies to coordinate assets and equipment procurements to achieve a certain level of commonality among the MAF and security agencies. Examples of such common assets are patrol boats / ships, small arms and ammunitions, helicopters, trucks, communication equipment and computerised systems.



23. Efforts towards ensuring the commonality of assets and equipment between the MAF and security agencies will enable integrated exercises and operations to be carried out more efficiently, in which operational and maintenance costs are minimised due to the commonalities of components and spare parts. This will assist the local defence industry to achieve economies of scale resulting in lower production and procurement cost.
24. The bulk of the MAF's basic necessities such as food, medicine, uniforms, rations, office furniture, barracks and other timber products are manufactured by numerous local SMEs. SMEs are also capable of contributing to the design and building of indigenous cyber technology, as well as technology design and building that includes, related software and hardware as well as related infrastructure. Through the DWP, the Government will continue to support the production and development of local technologies by SMEs to meet defence and security requirements.
25. The Government also recognises that local SMEs have provided crucial support to the primary local defence players as part of the supply chain in providing small parts, systems and logistical support. Hence, SMEs function as important elements in the defence industry ecosystem.
26. Although the local defence industry players support national defence by supplying some of its key assets, equipment and services, Malaysia will still have to procure certain assets, equipment and services from foreign companies. This is because the local defence industry has limited

technological capabilities. Therefore, the transfer of technology and knowledge encompassing the know-hows and the know-whys will be emphasised to enable industry players to master such technologies in the future.

27. The transfer of technology and knowledge can be materialised through industrial collaboration programmes (offset) when the Government procures equipment from foreign countries. Defence procurements include various value-added elements, particularly the transfer of technology, skills and knowledge that benefit users and local industry players. These offset programmes can also help SMEs to acquire funding for training and education to develop human capital.
28. **Restructuring Defence Industry-related Organisations.** The Government will take a proactive approach to restructure and if necessary, to create new posts or to establish a new organisation in order to achieve good governance for the defence industry. This includes empowering the existing divisions and agencies in planning and implementing transparent, as well as effective work procedures. Among the suggestions being closely considered is the establishment of the National Defence Science and Technology Advisory Council.
29. The Government will emphasise on the empowerment of defence industry players so as to make them more independent, innovative and competitive. Industry players will assist the government in providing inputs related to the defence and security industry so that continuous improvements can be made to develop the defence industry as an economic catalyst.
30. **Establishing a Defence Investment Committee.** The Government is committed to empowering the development of defence science, technology and industry by establishing a high level committee chaired by the Prime Minister, with members from related ministries and agencies. This committee will set policies and make decisions related to procurement of assets, particularly for high value strategic assets that necessitates a collective decision, taking into account the requirements of the MAF and security agencies. Decisions made at this highest level platform will increase assets and equipment commonalities between the MAF and security agencies to achieve economies of scale for the defence industry, as well as return on investment for the country. Commonalities between the MAF and security agencies will indirectly increase the market size and assets maintenance capabilities of local industry players.
31. The establishment of this committee reflects the commitment of the Government to enhance the development of defence science, technology and industry. Investment by stakeholders in the defence and security industry is vital to support the implementation of NDIP to achieve self-reliance in selected niche areas and to enhance the defence and security industry as an economic catalyst.
32. **Stimulating R&D and Innovation through Sustainable Funding.** The Government is cognisant of key defence industry players requiring support to conduct their R&D and innovation activities in order to produce defence assets and equipment to fulfil the nation's defence requirements, in line with the Innovation and Integration principle, as well as to enhance product marketability locally and internationally.
33. R&D and innovation in defence science and technology is costly. Therefore, the Government will allocate funds for R&D specifically for the development of defence and security assets and equipment. The Government will allocate 10% -15% of the total nominal offset value of the ICP for that purpose.

34. STRIDE, as a department under MINDEF responsible for all defence R&D activities, will coordinate all R&D activities in AI, unmanned systems, smart weapons and ammunition, radars and sensors, ISTAR, CBRNe, vehicle systems for land, sea and air, as well as defence space technology.
35. STRIDE will continue to provide technical support and advisory services to the MAF, government agencies and the local defence industry. STRIDE will also be the technical agency for defence product certification, playing a crucial role in ensuring the MAF and security agencies acquire high quality assets. Additional roles for STRIDE include aircraft black box analysis and being the technical agency for the Chemical Weapons Convention (CWC) Act 2005 and the Strategic Trade Act 2010. STRIDE is also the lead technical agency for the Biological and Toxin Weapons Convention (BTWC).
36. **Strengthening Talent Development Programmes.** The Government acknowledges that Malaysia's defence science, technology and industry requires concerted efforts to harness its potential to achieve self-reliance. One of the key aspects is developing human capital competent in conducting R&D, as well as designing and inventing technologically advanced products of international standards.
37. In order to empower defence science and technology, the Government acknowledges the importance of education in producing scientists, technologists and engineers to fulfil the needs of the nation's future defence. This requires a long-term planning with concerted efforts by the Government to prioritise defence science and technology fields.
38. The Government is highly committed to and strongly supports the development of the local defence science, technology and industry to achieve a high level of self-reliance and be a catalyst to the nation's economy.

CHAPTER 8



TRANSFORMATIONS, GOVERNANCE AND FUNDING

1. This inaugural DWP has provided an assessment of Malaysia's strategic outlook and articulated the National Defence Framework. It has also outlined the fundamentals of the nation's three-pillar defence strategy, mapping the pathways towards realising Concentric Deterrence, Comprehensive Defence and Credible Partnerships in the pursuit of national security, sovereignty and prosperity.
2. This concluding chapter puts forward the **three building blocks** for the implementation of the DWP plan. First, **pursuing defence transformations** for restructuring and institutionalising a more productive working relationship between and within the civil service and the MAF. Second, **institutionalising good governance** that ensures defence transformations are executed in phases, in a transparent and accountable manner. Third, **securing stable defence funding** so that the MAF is fully equipped with assets that meet current and future challenges. They are the essential enablers for the MAF to acquire the capabilities needed to protect Malaysia's national interests, particularly to defend the nation's sovereignty and territorial integrity.
3. The three building blocks are aimed at addressing the **capability, coordination and resource** gaps. The capability gap refers to the differences between the planned and current force structure of the MAF. The coordination gap refers to the challenges in configuring cohesiveness and efficiency involving the civil servants, the MAF and other security agencies, in the process of planning and executing defence and security-related policies. The coordination gap can be addressed through transformation of the MAF to enhance jointness between its Services and related security agencies. As for the resource gap, it refers to the financial constraints of renewing and enhancing the MAF's preparedness.
4. The effective and concurrent implementation of the three building blocks is the key towards ensuring a balanced, sustainable and productive defence ecosystem for Malaysia in the long run, in accordance with the Good Governance principle. They serve to maximise legitimacy, acceptability and reliability of the DWP. The implementation of the DWP will be carried out from 2020 until 2030, with biennial updates on its progress and a mid-term review.

Defence Transformations

5. The implementation of defence transformations will be undertaken by 2021 through a Defence Investment National Plan (*Pelan Pelaburan Pertahanan Negara*, 3PN), being the masterplan consisting of a vision and action plans from three components as follows:
 - i. Defence capability transformation;
 - ii. Defence capacity transformation; and
 - iii. Defence industry transformation.

Defence Capability Transformation

6. The Future Force described in Chapter 4 highlighted five main characteristics, namely jointness, interoperability, technology-based, able to operate simultaneously in two theatres and

mission-orientated. These characteristics are essential towards enabling the MAF to support the National Defence Strategy.

7. To realise these characteristics, the Government will review the current **4DMAF Strategic Development Plan** and other relevant documents to be aligned to the DWP. Subsequently, the review will include streamlining the Services' capability development plans, namely the Army 4nextG, #15to5 and CAP55.
8. This capability transformation is not only limited to enhancing interoperability among the MAF but also across all security agencies. The key objective for this transformation is to further improve coordination, procurement and information sharing between the military and other relevant agencies. The outcome will be registered in the 3PN.

Defence Capacity Transformation

9. To support the aims laid out in Chapter 4, 5 and 7 in minimising capacity gaps, the Government is committed to review existing policies in relation to human resource and establishing a **Defence Capacity Blueprint (*Rangka Tindakan Kapasiti Pertahanan, RTKP*)**. The focus is on enhancing the effectiveness of the defence workforce, which includes personnel in the Regular and Volunteer Forces as well as those in civilian roles in the defence and security establishments.
10. To maximise synergy between all three Services of the MAF through the transformation process, a Joint Force Command (JFC) will be established to further strengthen jointness. The development of professional soldiers will be implemented through a combination of training, education and self-development programmes. Priority will be given to enhancing science, technical expertise and management towards creating smart soldiers.
11. In appreciation of the veterans' invaluable contributions and sacrifices, the Government will also continue to review the benefits and facilities for the MAF veterans to ensure their wellbeing. The Government through this plan will explore new initiatives to further increase veterans' competitiveness in the job market by utilising their experience and skillsets gained during their services in the military. This would include employment opportunities in the public and private sectors.
12. The Government plans to create a specialised cluster of defence and security personnel to allow civilian officials and professionals to be rotated among the core security and defence agencies to ensure a lasting institutional memory and policy coherence in the defence and security cluster.
13. The Government will identify efforts to encourage the *rakyat*, particularly the youth to participate in national defence through existing mechanisms such as the Volunteer Forces. The RTKP will also envisage new initiatives to inculcate patriotism among all Malaysians as it forms the foundation in achieving Comprehensive Defence.
14. The RTKP will also outline approaches to cultivate talents in defence science, technology and industry fields. In this regard, the Government is committed to strengthening the education and research ecosystem. This will include working closely with reliable partners to train officers in defence-related R&D.

Defence Industry Transformation

15. Chapter 7 expressed the Government's intention to formulate a new approach in the field of defence science, technology and industry. For that, the Government is committed to strengthening existing initiatives by formulating a Defence National Industry Policy (*Dasar Industri Pertahanan Negara*, DIPN) that serves as the policy framework and guidance for this sector's development. It will additionally encompass strategies for enhancing defence technology and science research, funding and education while cultivating long-term favourable conditions to unleash Malaysia's full potential in this field.
16. To drive the national defence industry, the Government will restructure the organisational framework to oversee the implementation of DIPN and to ensure good governance. The restructuring among others, is aimed at empowering the existing divisions and agencies to plan and implement transparent and effective work procedures.
17. The capability, capacity and defence industry transformations, as well as defence partnerships discussed in Chapter 6 need to be mutually supporting and strengthening. Hence, the 3PN is developed to ensure the successful implementation of defence transformations.
18. Subsequently, the Government will execute phased **defence transformations** as specified in the following timeline:

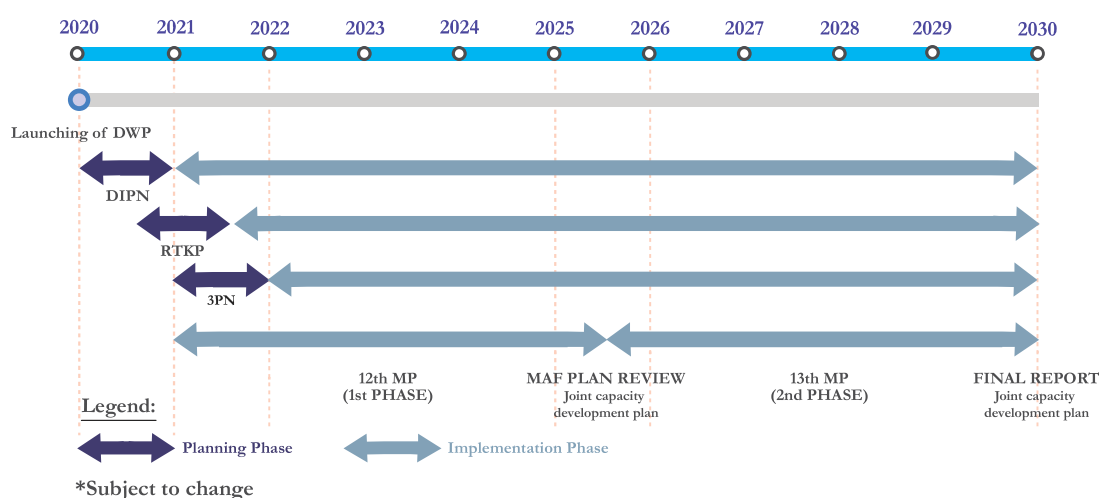


Figure 8.1: Defence Transformation Timeline.

Good Governance

19. The Government pays serious attention to the issues of good governance encompassing transparency, integrity and accountability. A holistic monitoring mechanism to oversee the defence transformation process is essential, not only to secure support from the *rakyat* but also to ensure that there will be proper supervision of the transformation and implementation processes.
20. To ensure the success of the DWP, a **Defence Transformation Committee** will be established to supervise the defence transformation processes consisting of **defence capability, defence capacity and defence industry**. The Committee will also seek to facilitate effective inter-agency cooperation between MINDEF and relevant agencies to ensure transformations are implemented in a whole-of-government approach.

21. The Government supports the active role of the Parliamentary Special Select Committee on Defence and Home Affairs in exercising oversight towards issues related to defence and security. Likewise, a Defence Investment Committee chaired by the Honourable Prime Minister with representatives from relevant government stakeholders will ensure decisions on defence investments are made based on national interests.
22. The Government will continue institutionalising good governance through the conduct of checks and balances within the Malaysian security and defence sector in line with the principles of accountability and transparency, as well as ensuring that security providers are operating effectively in accordance with legal and policy frameworks. Overall, the continued process as well as regular disclosures on the implementation of the DWP and defence transformations will elevate public awareness of defence matters and garner stronger public support for national defence transformations.
23. The Government shall implement the DWP through a holistic oversight mechanism, as follows:



Figure 8.2: Structure of Defence Transformation Monitoring Committee.

Funding

24. Securing a stable defence funding is essential to bridge the resource gap and enhance the MAF's overall preparedness. In this context, the Government is cognisant of the fact that there are competing demands on the national budget. Trimming the national debt remains a priority for the Government. Despite these obstacles and challenges, the need for continuous investment is important in ensuring long-term sustainable capability development for the MAF.
25. The Government intends to achieve the following desired characteristics of defence funding:
 - i. **Long-term and stable.** Defence spending is inherently long-term. The acquisition of defence assets and equipment is capital intensive and takes many years. As such, the process would extend beyond a single Malaysia Plan. In this context, stable yearly funding will ensure a more efficient defence management.

- ii. **Affordable and sustainable spending.** In return for long-term and stable defence funding, the Government will continuously ensure that affordable and sustainable defence spending is in a transparent and accountable manner. Central agencies and the Parliamentary Special Select Committee on Defence and Home Affairs play an important role in ensuring funding and spending are in accordance with the plans set out in this DWP.
26. Stable funding for the defence and security sector will facilitate a long-term, comprehensive capability development. Standardisation will enhance the Government procurement process as well as increase interoperability and commonality between the MAF and security agencies. This will also strengthen the local defence industry as an economic catalyst. A more cost-effective and return on investment will ultimately inspire greater confidence among the *rakyat* towards the Government.
 27. The Government is determined to provide a long-term and stable stream of defence funding based on the nation's financial capability to ensure seamless execution and implementation of the DWP.
 28. The Government will continue to adopt proactive measures towards achieving good governance in national spending and procurement. In this context, the Ministry of Finance has initiated a review of the process of acquisition, implementation and monitoring of physical and non-physical projects, including those at MINDEF. Following the adoption of Zero-Based Budgeting mechanism, all expenditure items are subjected to be reviewed and scrutinised constantly.

Summary

29. To maximise legitimacy, acceptability and reliability of the DWP, all plans will be documented for implementation and monitoring. By evaluating the impacts of the changing security environment, the DWP has set the direction for defence transformations to take place over the next 10 years to realise the Future Force and its interoperability with other security agencies alongside enhancing collaboration with the *rakyat*. One of the most valuable outcomes of the DWP is the Government of Malaysia's commitment to pursue the three pillars of strategy, namely Concentric Deterrence, Comprehensive Defence and Credible Partnerships in line with the vision of **Malaysia as a secure, sovereign and prosperous nation**.

ABBREVIATIONS

#15to5	Royal Malaysian Navy #15to5 Transformation Programme
3PN	Defence Investment National Plan (<i>Pelan Pelaburan Pertahanan Negara</i>)
4D MAF	Fourth Dimension Malaysian Armed Forces
ADMM	ASEAN Defence Ministers' Meeting
ADMM-Plus	ASEAN Defence Ministers' Meeting-Plus
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AI	Artificial Intelligence
AMRG on HADR	ASEAN Militaries Ready Group on Humanitarian Assistance and Disaster Relief
AMS	ASEAN Member States
APT	ASEAN Plus Three
ARF	ASEAN Regional Forum
Army 4nextG	Army for the Next Generation
ASEAN	Association of Southeast Asian Nations
AV	Armoured Vehicles
BTWC	Biological and Toxin Weapons Convention
C4ISRT	Command, Control, Communications, Computer, Intelligence, Surveillance, Reconnaissance and Targeting
CAP55	RMAF Capability Development Plan 2055
CBRNe	Chemical, Biological, Radiological, Nuclear and Explosives
CDF	Chief of Defence Force
CDOC	Cyber Defence Operation Centre
CEC	Cyber Electromagnetic Command
CEMA	Cyber Electromagnetic Activities
CIMIC	Civil-Military Cooperation
CNII	Critical National Information Infrastructure
COIN	Counter-Insurgency
DELSA	Disaster Emergency Logistics System for ASEAN
DWP	Defence White Paper
EAS	East Asia Summit
ECWC	Electronic and Cyber Warfare Centre
EEZ	Economic Exclusive Zone
EiS	Eyes in the Sky
EW	Electronic Warfare
HADR	Humanitarian Assistance and Disaster Relief
HANRUH	Total Defence (<i>Pertahanan Menyeluruh</i>)
HLC	High-Level Committee
ICP	Industrial Collaboration Programme
ICT	Information and Communication Technology
IMT	International Monitoring Team
INTELEX	Intelligence Exchange
IoT	Internet of Things
IR4.0	Fourth Industrial Revolution
ISTAR	Intelligence, Surveillance, Target Acquisition and Reconnaissance
JF HQ	Joint Force Headquarters
LCA	Light Combat Aircraft

LCS	Littoral Combat Ship
LMS	Littoral Mission Ships
MAF	Malaysian Armed Forces
MALE	Medium Altitude Long Endurance
MCSS	Malaysia Cyber Security Strategy
MDA	Maritime Domain Awareness
MFH	Malaysia Field Hospital
MINDEF	Ministry of Defence
MMEA	Malaysian Maritime Enforcement Agency
MoU	Memorandum of Understanding
MPA	Maritime Patrol Aircraft
MRCA	Multi Role Combat Aircraft
MRO	Maintenance, Repair and Overhaul
MRSS	Multi Role Support Ship
MSP	Malacca Straits Patrol
MSSP	Malacca Straits Sea Patrol
NACSA	National Cyber Security Agency
NCO	Network Centric Operation
NDIP	National Defence Industry Policy
NDP	National Defence Policy
NGPV	New Generation Patrol Vessels
NSP	National Security Policy
OBUA	Operations in Built-Up Areas
PKO	Peacekeeping Operations
R&D	Research and Development
RKAT	<i>Rumah Keluarga Angkatan Tentera</i>
RMAF	Royal Malaysian Air Force
RMN	Royal Malaysian Navy
RTKP	Strategic Defence Capacity Plan (<i>Rangka Tindakan Kapasiti Pertahanan</i>)
SAR	Search and Rescue
SATCOM	Satellite Communication
Sec-Gen	Secretary General
SKRL	Singapore-Kunming Rail Link
SLOC	Sea Lines of Communication
SME (PKS)	Small and Medium Enterprises (<i>Perusahaan Kecil dan Sederhana</i>)
STRIDE	Science and Technology Research Institute for Defence
TCA	Trilateral Cooperative Arrangement
UN	United Nations
UNHRD	United Nations Humanitarian Response Depot
UNIFIL	United Nations Interim Force in Lebanon
US	United States of America
WFP	World Food Programme
WMD	Weapons of Mass Destruction
ZOPFAN	Zone of Peace, Freedom and Neutrality









Ministry of Defence

ISBN 978-967-16437-6-1



9 789671 643761 >