

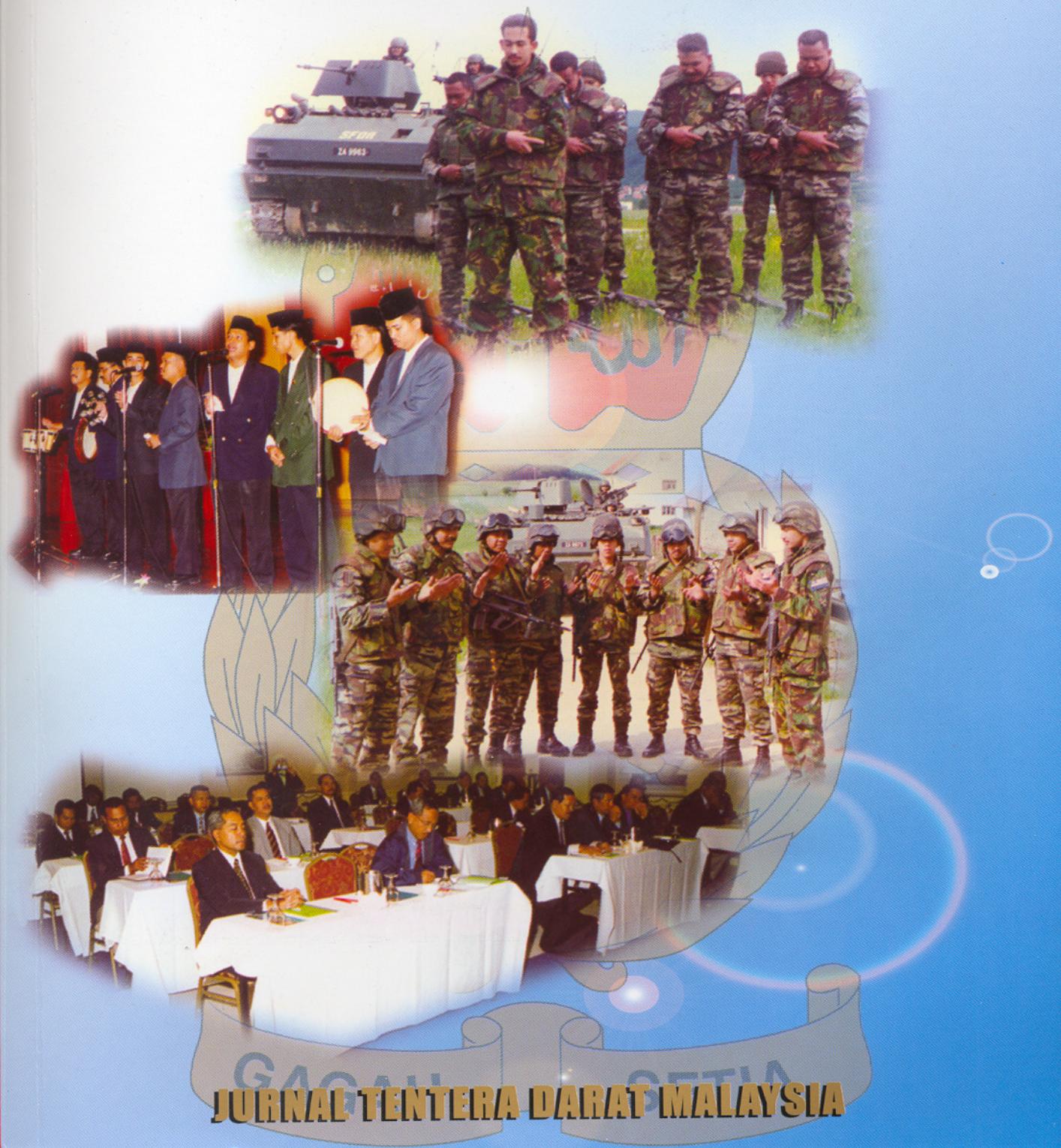
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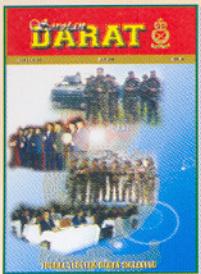
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JURNAL TENTERA DARAT MALAYSIA



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AIR LOGISTICS SUPPORT IN THE BATTLEFIELD: FORMULATING A MALAYSIAN SOLUTION

— By : Kapt Muzafer Shah bin Mosam Shah —

"Before a commander can even start thinking of manoeuvring or giving battle, of marching this way and that, of penetrating, enveloping, encircling, of annihilating or wearing down, in short of putting into practice the whole rigmarole of strategy, he has or ought to make sure of his ability to supply his soldiers with those 3,000 calories a day without which they will very soon cease to be of any use as soldiers; that roads to carry them to the right place at the right time are available, and that movement along these roads will not be impeded by either a shortage or a superabundance of transport"

Supplying War, Logistics From Wallenstein to Patton¹

INTRODUCTION

Today, the Malaysian Armed Forces (MAF) especially the Malaysian Army finds itself in "interesting times". It is interesting because we are experiencing a shift in the nature of the art of operations. The paradigm shift goes beyond, simply due to the new possibilities information technology offers in the operational environment. It stipulates new rules for the army to function according to our art of operation. New strategic realities had evolved thus making the army exposed to a very complex battlefield that will combine the challenges of difficult and unfamiliar terrain, terrorists and paramilitaries, refugees and unfriendly civilians' organisations that will increase the complexity of the art of operations.

The battle space of tomorrow requires the army to have a strategic dominance across a wider range of military operations. It must be able operate as a joint, combined and multinational formation for missions across the spectrum like humanitarian assistance and disaster relief, peacekeeping operations and also to operate in a major theatre of war that will also include conflicts that have a potential employment of weapons of mass

destruction (WMD). The army must be responsive and decisive towards every point of the operational spectrum.

The Malaysian Army is now diving into the newly evolved Rapid Decisive Operation (RDO). By definition the RDO is a joint operational concept for future operations. A rapid decisive operation will integrate knowledge, command and control, and effects-based operations to achieve the desired political and military effect. In preparing for and conducting a rapid decisive operation, the military acts in concert with and leverages the other instruments of national power to understand and reduce the adversary's critical capabilities and coherence².

Throughout the 20th century, we have witnessed radical changes in the ways wars are planned and fought. Limited scale warfare has become central approach to modern military planning. In the 21st century, military experts had foreseen that the army should "be rapidly tailorable, expandible, strategically deployable and effectively employable as part of joint and multinational effort to achieve decisive results"³.

The geostrategic environment of the 21st century will pose fresh challenges, tendering a different and, if handled properly, an auspicious

¹ V.C. Martin.1977. Supplying War, Logistics from Wallenstein to Patton.

² J9-Joint Futures Lab.2000. A Concept For Rapid Decisive Operations. USJFC pp1.

³ TRADOC. 1994. Force XXI Operations. pp3-1.

context in which logistics will assume a more consequential role. Definitely, effective logistics can contribute hugely to setting more conducive future military operations. In response to these new developments, the logistician is also faced with a more difficult task in sustaining such dynamic and versatile force.

Any war fighting doctrine being introduced will necessarily exert a significant amount of influence on logistics practices. In relation with the previously mentioned RDO, is the ever-popular "manoeuvre-warfare" doctrine. A logistics system must dovetail with manoeuvre warfare⁴. Their (manoeuvre warfare) characteristics determine the logistics system applicable to a considerable degree. Mobility, physical manoeuvre, offensive surprise, high opening tempo and penetration will generate extraordinary logistical requirements. It will make every effort to increase volatility and unpredictability; as a result, the logistics system must be correspondingly responsive, spontaneous and creative thus making the logistics system more agile.

The significance of an existence of a high tempo and agile nature of operation nevertheless are fully justified⁵. Referring to the logistics phases mentioned previously, the most sensitive phases are unquestionably from Phase Two up to Phase Four this is due to the total dependence of a Line Of Communication (L of C). L of C is vulnerable especially to asymmetrical threats, which are presently popular when confronting with a inferior adversaries (such as faced by the US in Iraq). Therefore, this is where as a professional logistician, he or she must be able to have a significant and viable alternative for the L of C to function 24 hours regardless day or night as required with the right quantity and on time. In order to ensure that lifeline of the combat element are always kept open the alternatives chosen must be able to be responsive, effective and efficient in providing compensation for the depleting situation of an L of C.

Air power, land power and sea power constitute the three major entities within the elements combat power. The earliest, is distinguished by its flexibility, speed, ubiquity, range and shock effect. It will give

land forces commanders the ability to concentrate forces and manoeuvre rapidly over long distances. Thus, it is the only element of combat power that can rapidly bring both offensive and defensive action into the battlefield in the shortest time⁶.

By merging and incorporating both airpower and logistics system we (the logisticians) will have a highly potent and versatile battlefield solution to a disrupted L of C. As a result, the logisticians will support the army's operational doctrine without prejudice.

AIRLAND BATTLE CONCEPT AND THE MALAYSIAN ARMY

As the army marks its 71st anniversary, the challenges it faces since the jungle and urban warfare of WW II, "confrontation", communist insurgency and the Cold War are getting more complex and fluid. The adoption and embracement of the RMA into the foundation of the army, had initiated the revamping process of the traditional army into a full-fledged conventional fighting force. Although the army is downsizing from 110,000 (2001) to the current 85,000 men, the new army is based on the concept of task-oriented missions in improving its firepower and assault capabilities.

However, as quoted by the previous COA (Gen. Dato' Wira Mohd Shahrom bin Dato' Nordin) "the key role of the Malaysian army is to defeat external aggressor on land"⁷, with the formation of the 10th Para Brigade, the army is given the ability to deploy rapidly. It had given the National Security Council the much-needed flexibility and options to deal with any probable and imminent threat. Presumably, the army is already adopting the air land battle concept within the conduct of force projection operations (i.e.: Sabah and Sarawak deployment), Special Operation Forces operations (i.e.: airborne and amphibious assault) and Special Forces operations (i.e.: raids, reconnaissance and surveillance)

Clearly stated in "Coup D'oeil Handbook", factors to be considered in modernising the army is

⁴ NDP1. 1994. Naval Warfare. Washington DC

⁵ A good example is the US-UK Coalition in Operation Iraqi Freedom. The coalition intends to capture Baghdad less than a week.

⁶ RMAF. 2002. Air Power Doctrine. 3r Ed. AF HQ.MINDEF. Pp17.

⁷ ADJ. Mar 2003. Top Brass Interview: Malaysian's COA. KL. Pp14.

mobility and sustainability⁸. By definition, the terms translate as follows:

- „ **Mobility.** The ability to undertake manoeuvre effectively would require mobile assets to be employed, in both symmetric and asymmetric warfare. Mobility will allow forces to circumvent enemy stronghold, whilst delivering weapon systems and personnel into critical areas in the battlefield.
- „ **Sustainability.** This is the most important criterion for future equipment and systems procurement. This process will ensure effective sustainability and future upgrade.

These considerations are similar to the tenets of airland battle. Therefore, virtually the army had already been focussing towards a more dynamic battle concept. Through the formation of a various manoeuvre formations such as the 3rd Infantry Division as a “Combined Arms Division”, the 10th Para Brigade, the Army Air Wing and “Armoured Brigade”, it proves and justifies the seriousness of the Army in giving more rapid and decisive action toward a wide spectrum of crisis. To conclude, the army is basically adopting the airland battle concept in designing and also formulating the solutions for the force’s firepower and mobility capabilities. The newly structured and already operational SIB (Standard Infantry Battalion), is the best example of such formulation.

THIRD DIMENSION COMBAT SERVICE SUPPORT (3D CSS)

“Victory is the beautiful, bright coloured flower. Transport is the stem without which it could never have blossomed”

*Winston Churchill
The River War 1899*

THE CONSERVATIVE LOGISTICS SUPPORT OPERATION

According to the US Joint Log Support Manual (JF 4-0), this is an effort which applies logistics

resources to generate and support theatre combat power. Today the logistics concept entails balancing objectives, schemes of manoeuvre and operational timings.

The main focus is to achieve Operational Reach for the manoeuvre forces deployed. They (military commanders) will ensure that their campaign plans are fully integrated with the operational and logistical capabilities, they also must make sure that the interrelationship between operation and logistics are achieved through close cooperation and early-on understanding of the missions assigned to subordinate commanders.

Traditionally the key factors that are required to achieve the overall logistics plan in the theatre concept of operation are as follows:

- „ **Logistics System.** It is a critical element of a theatre logistics system, timely integration of both inter and intra theatre transport of personnel, equipment and personnel within the theatre distribution system. The means to move people and materiel forward and to evacuate them to the rear is the fundamental to a successful theatre operation. However, some considerations are vital in developing such responsive logistics system, such as; geography, transportation, logistics capability, logistics enhancements, logistics infrastructure protection, echelons of support, assignment of responsibilities and lastly is the availability of host nation and multinational support⁹.

- „ **Theatre Concept Of Logistics Support.** The concept of logistics support must be derived from the estimate of logistics supportability of one or more developed assessment which is in turn derived from the commander’s estimate phase and planning. It is the envisioned manner of the capabilities and resources of the combatant. The commanded service components will be employed to provide supply and services, maintenance, transportation, engineering and health services. It is the organising and specifying of capabilities and resources into an overall theatre support concept. Special attention is to be given to the L of C to be

⁸ Army HQ.2002. Coup D’oeil”.KL. Pp17.

⁹ JP4-0.1996. Joint Logistics Support. PpIV-3

developed, as well as support to be provided by the theatre or area of operation.

EXTENDING OPERATIONAL REACH

The logistics concept devised is aimed to give the deployed forces the ability to extend its capability to sustain in relation with the airland battle concept and the ability to engage in combat rapid and decisive battles. These characteristics are called collectively as *Operational Reach*¹⁰.

Operational Reach is defined as the distance over which military power can be concentrated and employed significantly. Forces of today will focus primarily on defeating and deterring the enemy's strategy and will, and on gaining strategic depth, initiative and also advantage by proper strategic concentration of forces and logistics. In accordance with the deployed forces view of the operational reach, it centres on the rage at which commanders may mass and employ forces decisively for war or Military Operation Other Than War (MOOTW).

Nevertheless, Operational Reach goes beyond merely conducting reconnaissance or strike operations at a designated distance. It is influenced by the length, efficiency and security of the distribution system and L of Cs if be it sea, air or land based. It is achieved through the dependant on the ability to phase reserves and positioned materiel forward. In relation to that factor, Operational Reach is also affected by operating ranges and endurance of the combat forces and sustainment.

In accomplishing Operational Reach, land forces must deploy their combat elements ahead of support forces. In consequence, the logistician must use all available assets to provide sufficient level of sustainment for the deployed forces. In improving this, they (the logisticians) must establish advance bases or depots and through the improvement of security on the overall distribution system and the L of C itself.

¹⁰Ibid. Pp IV-4.

THE LOGISTICS SUPPORT OPERATION APPLICATIONS

Logistics is a force multiplier. Close correlation of combat power between opposing forces gives small advantage to the adversary. However, by utilising and manipulating logistics support, it will play an important role both offensively and defensively. This is attained through the increment of timelines and endurance of the force. As an example, pre-positioned stocks or pre-conflict stock build up will enhance throughout of advance elements of the deployed forces.

Logistics is deterrence. Deterrence can be obtained through the build up of logistics forces and the activation of logistics reserve component forces. Positioning and increasing the state of readiness of logistics forces within or in the vicinity of the Area of Responsibility (AOR) may defuse tension or crisis. These actions are less provocative than the posturing of combat forces.

Logistics will give flexibility. Via pre-planned composition and disposition of military forces and logistics resources flexibility can be obtained. It should allow both exploitation and recovery -operations in the shortest possible time.

To accomplish all of these results and advantages, logisticians and tacticians must embrace the management of change concept in realising a timely support and response. In providing logistics support to a highly dynamic force, paradigm shift of logisticians must be implemented especially incorporating other elements of combat power in responding to such demands. Fast pace and responsive is the way to go. This is where the logistics support of future army must embark to the 3rd Dimension, which is the ALOC.

3-D SOLUTION FOR A 2-D ENIGMA

The battle spectrum of tomorrow is already embarking towards the 3rd dimension of the battle space, which is through the air as an alternative, or maybe the solitary preference of deployed forces' L of C.

As mentioned earlier, asymmetric threats and the rapidness of manoeuvre forces engaged in a high

tempo battle or conflict can affect the L of C efficiency. In depth, asymmetries threat to the deployed L of C pose a significant drawback to the traffic flow itself. These threats will disrupt the competency of the L of C in providing sustainment to the forces deployed through sabotage, air raids and strategic bombing. The traditional land based L of C are easily influenced by these form of threat. As we are aware, modern warfare is always synonymous to rapid manoeuvre warfare (previously mentioned as RDO), the rapidity of the manoeuvre (especially during the conduct of mechanised, airborne and amphibious operations) is so great that the normal logistics distribution systems are unable to cope and sustain the requirement. These two significant problems surely manifest the importance and feasibility of the air logistics support as the best alternative and sometimes solution.

In conjunction with the shift, logistics support of tomorrow will be able to support the tenet of Airland Battle and also the RDO concept in providing the most responsive logistics support to the more dynamic forces. The military and especially the army will adopt aggressively the air based L of C in achieving the RDO.

Air Logistics Support operation defined as “air operation excluding airborne operation, conducted within a theatre to distribute and recover personnel and materiel”¹¹. It (air logistics support) has been an important feature of modern warfare since General Francisco Franco, in 1936; air landed his Moroccan forces in southern Spain during the opening phase of the Spanish Civil War. The concept gained currency during the World War II, especially as an element of airborne operations.

In this context, the air logistics support will assist these forces during the vertical envelopment. Therefore, there is a dependency on such support in introducing and maintaining combat forces in the shortest time possible and to sustain them during the initial, and probably during the most critical phases of operations.

THE ARMY-AIR FORCE SYNERGY

“Where is the prince who can afford so to cover his country with troops for its defence, As that 10000 men descending from the clouds, might not, in many places, Do an infinite deal of mischief before a force could be brought together to repel them”

Benjamin Franklin¹²

As clearly stated in the pre mentioned airland battle concept the air power is distinguished by its flexibility, speed and ubiquity, range and shock effect. These characteristics give it a unique ability to concentrate force and manoeuvre rapidly over great distances. Thus it is the only single power that can rapidly bring offensive and defensive action within the shortest time.

The air strategy, defined as the “overall employment plan for air forces in a war”¹³. This had given it unique characteristics for it to give very wide potential military strategic applications. The application characteristics are as follows:

„ **Counter Air Role.** The use of air power to deter, contain or defeat the enemy air forces.

„ **Force Application Role.** Independent use of air power to achieve national policy objectives.

„ **Force Enhancement Role.** To increase the ability of air and surface forces to perform their missions.

„ **Force Sustenance Role.** Actions taken to sustain our ability to conduct operations successfully.

Air power is a very complex business and all commanders should be certain that they have adequate levels of professional advice in guiding its employment. Every commander (both sea and land) must have an understanding of airpower strengths and limitations. The utilisation of air power can be approached as follows:

„ **Strategically.** It uses the air power’s superior reach, responsiveness and lethality to ex-

¹¹ RMAF HQ. 2002. Air Power Manual. Pp 104.

¹² Ryan,C. A Bridge To Far, Touchstone Book, 1974, p122.

¹³ RMAF HQ. Air Power Manua. Pp 31.

ploit the uncertainty of asymmetric response, and to strike directly at vital points, achieve strategic surprise and shock, and confound the enemy's situation awareness.

- „ **Operationally.** Attacking military objectives using the airpower versatility, reach, concentration, penetration and lethality, rather than undertaking an attrition campaign. Airpower may also permit the conduct of concurrent operations and campaigns.

- „ **Tactically.** It will exploit the element of surprise by dynamic leadership, high quality crews, innovative tactics, deception and speed of manoeuvre.

The effectiveness of air power is directly proportional to situational awareness (SA). SA is observation-orientation of the strategic, operational and tactical dimension. It is also defined as follows:

- „ **Strategically.** SA is strategic warning which will provide timely warning of potential threat to national security.

- „ **Operationally.** It will give a commander knowledge dominance in an area of operations.

- „ **Tactically.** It will enable a person to dictate activities in the battle space.

With that explanation, we could conclude that airpower will give us (the land force commander) the vertical avenue in sustaining the force effectively. As a result, the land force could operate at all strategics level of war. It will become a direct instrument to effect national policy and also as an essential war-fighting tool. Through the "air power–force enhancement" application which is "air mobility" or popularly known as "airlift", it will offer its customers a high degree of speed, range, flexibility. Airpower is a manoeuvre force, and air mobility is an integral part of that manoeuvre force¹⁴. Air mobility will enable commanders to respond and operate in a wide variety of circumstances and time frames that would be impractical through other

modes of transportation. In addition, the air mobility capability will enhance the "*Malaysian National Strategic*" policy through rapidly deploying or redeploying personnel and materiel to and from or within a theatre. It is a cornerstone of global force projection; it will provide the means to rapidly deploy forces on short notice globally.

In maintaining the level of effectiveness, airlift sustainment missions provide re-supply of high-priority equipment, personnel and supplies. Again it is stressed that the air mobility characteristics will entail speed, flexibility, range, responsiveness and the ability to swing forces from theatre to theatre¹⁵. These vital qualities will complement other mobility assets available to the deployed forces.

To support the airland battle concept of the land forces within the joint operation environment, synergy with the air force is the most paramount requirement. Concentration of air and land power will produce decisive and sustainable combat effectiveness. In Malaysia the merger of both elements were achieved through the Joint Forces Command (JFC) of the MAF-HQ.

AIR LOGISTICS SUPPORT – THE VERTICAL OPERATION

"Strategy decides where to act; logistics bring the troops to this point"

Jomini

THE ROOTS OF AIR MOBILITY

Even before the airplane became a practical proposition, dreamers envisioned movement through the air-and immediately discovered diverse purposes. From the beginning, they saw the airship in multiple roles. It promised to be much cheaper than a cruiser for scouting at sea and seemed to represent a new mode of transporting goods and people over long distances

¹⁴ JP 3-17. 2002. *Joint Doctrine and Joint Tactics, Techniques, and Procedures for Air Mobility Operations*. ppIV-1.

¹⁵ Ibid. Pp IV-2.

¹⁶ Michael Fricano, 1996. *The Evolution of Airlift: Doctrine and Organization*. Maxwell AFB, Ala.: Air War College, 1 April 1996. Pp 4-5; and Roger G. Miller, 1998. "The U.S. Army Air Forces in Air Transport on the Eve of Pearl Harbour," in Air Mobility Symposium, 1947 to the Twenty-First Century. Washington, D.C.: Government Printing Office. Pp 3.

¹⁷ Richard K. Smith, "Invisible Men, Invisible Planes: In-Flight Air Refueling," in Air Mobility Symposium, 59–63.

and all sorts of obstacles, quickly and at a low price. Even before the zeppelins came on the scene, people speculated that a new kind of warfare was at hand- bombardment from above at very long ranges. Aircraft attempted aerial re-supply, with 50-pound sacks, at the siege of Kut in World War I, and Billy Mitchell had plans to deliver troops via parachute in 1919, but the end of the war prevented that- fortunately for the troops¹⁶.

In the American interwar context, the military did not do much with what has come to be known as air mobility. The Air Service successfully experimented with air refuelling in 1923 and again in 1929¹⁷. The Air Corps tried to develop organic airlift to support the mobility of its striking forces but did not get very far in that age of austerity. It also experimented with regular logistical runs by air to improve mission-ready rates and lessen the costs of inventorying high-value parts.

Before the onset of war, the Air Corps did most of the thinking about air transport- for the Air Corps. But after Pearl Harbour, two other major inputs emerged: mobilization by the airline people for wartime service, and our experience with the Luftwaffe's airborne-assault units, which prompted it to take action¹⁸. The former event laid the foundation for the Air Transport Command (ATC), and the latter stimulated both the British and American armies to follow the Germans and the Russians into troop-carrier kinds of operations. Notwithstanding some giant fiascos in the airborne experience and generally sound air-logistics operations, both modes of movement came out of the war with powerful followings¹⁹.

AERIAL DELIVERY REBORNE

Technological advances in this century have made surface deployment a speedier and more efficient process. However, the movement of forces by rail, road and sea is still in many circumstances are slow, too restricted by geographical constraints or too susceptible to hostile interception.

¹⁶ Jack E. King Jr., 1982. "The Air Transport Command: The Strongest Link in the Chain," American Aviation Historical Society Journal 43 (Summer 1998). Pp 82.

¹⁷ Ibid. 87.

¹⁸ Nancy Harrington and Edward Doucette, "Army After Next and Precision Airdrop," Army Logisticians, Vol. 31, No. 1 (January-February 1999), Pp. 46.

The growing perception of such limitations was coupled with an increasing awareness of what airlift could offer in terms of speed, reach and capacity to the land forces. Mobility is a key requirement of small forces with worldwide commitments. We simply cannot hope to be superior everywhere.

For many years it has been fashionable to decry tactical airlift and, especially, airdrop as being anachronistic, it was a holdover from the Second World War-era when mass Para-drops were a regular feature of combat operations. Given the increased lethality of air defences and the huge cost of military transport aircraft; many commanders questioned the efficacy of such risky operations. However, new technology, combined with emerging operational concepts that call for rapid force projection, distribution-based logistics and a minimal logistics footprint²⁰, have produced an aerial delivery renaissance. Rather than being consigned to the scrap heap, airdrop is being recycled as an increasingly effective part of contemporary joint operations.

Theorists have recognized the military potential of vertical envelopment since Leonardo da Vinci first conceived the parachute²¹. Following the advent of aircraft in the early 20th century, the first operational use of parachutes took place during the First World War. Initially frowned upon by commanders who believed their availability would encourage pilots to abandon ship too readily, other uses quickly developed.

While the Royal Air Force could not deliver enough supplies to prevent the British garrison in Mesopotamia from falling in 1916²², an increase in payloads that could be carried enabled them, two years later, to save a combined Belgian and French force trapped in the Houthulst Forest in Belgium²³.

²¹ A History of Flying (London: B.T. Batsford Ltd, 1953), Pp. 50-51. Da Vinci (1462-1519) developed rudimentary parachute sketches around 1514-1516. Jesuit Father Francesco de Lana (1631-1687) later proposed developing an "aerial ship" for military purposes. After drawing an aerial vessel held aloft by four spheres "empty of air," de Lana was the first to theorize about the techniques of invasion from the air.

²² Michael Armitage, 1993. *The Royal Air Force – An Illustrated History*. London: Arms and Armour Press. Pp. 29.

²³ Hilary St George Saunders, 1944. *Per Ardua – The Rise of British Air Power 1911-1939*. London: Oxford University Press. Pp. 277.

²⁴ Anthony Farrar-Hockley, *Student* (New York: Ballantine Books, 1973), pp. 31-47 & 134. Operation "Merkur" resulted in 6000 casualties and over 150 lost transport aircraft. The Luftwaffe reinforced Hitler's reservations about airborne operations the following year when they failed to relieve von Paulus' Sixth Army at Stalingrad.

This pointed the way to future usage. By the end of the war, aerial delivery had captured the imagination of military strategists everywhere.

During the inter-war period, airborne experimentation was led primarily by the Russians and Germans, and paralleled the development of purposely-designed transport aircraft. Germany subsequently used large numbers of fallshirmjager (paratroops) and glider-borne infantry with startling effectiveness at the beginning of the Second World War. Airborne assault played an important role in the fall of Denmark, Norway, Holland, Belgium and France. Nevertheless, after heavy casualties during the invasion of Crete, Hitler decided that the element of surprise had been lost and declared the days of parachute forces to be over²⁴.

Spurred on by the Axis lead in parachute operations, the Allies created their own airborne forces. Despite considerable heroics, however, the spotty record associated with mass airdrops raised questions about their continued usefulness. Whereas the Sicily drops were a failure, Normandy was an airborne success²⁵. Similarly, although the attempt to capture an operational objective at Arnhem failed, the more limited tactical objective of capturing a Rhine bridgehead succeeded a few months later. As a result, although nations continued to invest in airborne forces after the war, consensus developed that the risks associated with aerial delivery limited its utility to emergencies or covert missions. Consequently, there were few airborne operations during the many small but intense conflicts conducted throughout the Cold War.

Two other factors contributed to the decline of airdrop operations. First was the development of specialized military airlift aircraft such as the C-119 'Flying Boxcar' or C-130 Hercules. Not only were these aircraft expensive, they were also critical to deploying forces abroad and in projecting strategic power. As national assets, questions arose about risking such valuable resources on limited, tactical missions. Compounding this was the introduction of shoulder-fired, man-portable air defence weapons, surface-to-air missiles and the proliferation of light

and medium anti-aircraft artillery. Many people considered such a combination a recipe for disaster — exposing high-value assets over a heavily defended drop zone simply did not make good sense. Against this backdrop, therefore, the future of aerial delivery was bleak.

However, new technologies have been developed that now make it possible to employ tactical airlift assets without undue risk. Precision capabilities and stealth have given tactical airlift new and safer operational characteristics. Rather than following low-level routes and popping up over the drop zone at the last second to minimize exposure to enemy air defences, air-lifters can now avoid the threat area entirely.

Due to the technological advances, it is no longer necessary to over-fly the target to deliver the load accurately. The adaptation of steerable parachutes from the sports world, together with mechanical systems that integrate Global Positioning System (GPS) equipment, make it possible to drop loads with great accuracy from above or outside the enemy air defence envelop. Moreover, because the parachutes are steerable, offset navigation enables aircraft to avoid hazardous objective areas. This not only enhances mission flexibility and helps protect the aircraft, it also safeguards operational security. Since aircraft no longer have to over-fly the target, there is less risk of revealing the location of the objective before the ground phase of the operation.

The use of stealth also offers the potential for enhancing the element of surprise. Although there are no stealth transport aircraft yet in service²⁶, the use of stealthy airdrop containers would reduce the radar cross-section of large loads, thereby contributing to operational success. The airdrop of both cargo and personnel is feasible using this technique. In the same way that smart bombs were developed to increase accuracy and reduce risk to delivery platforms, the same 'drop and forget' technology could be applied to airborne operations, thus making the forward delivery of troops and equipment tactically effective once again.

²⁴ David Wragg, *Airlift*. (Novato CA: Presidio Press, 1986), pp. 50-56. The Sicilian drop suffered from poor navigation that scattered the force across the countryside and into the Mediterranean where many troops drowned. Ironically, soggy drop zones also produced casualties on D-Day.

²⁶ David A. Fulghum, "Bombers, Missiles Stay In Long-Range Plans" Aviation Week & Space Technology, Vol. 150, No. 21, (May 24, 1999), Pp. 84.

Several new delivery systems are now under development in the United States. The Advanced Precision Airborne Delivery System (APADS) is a high altitude, offset delivery method that incorporates a gliding (ram air) parachute with autonomous GPS navigation. When dropped from above 25,000 feet, the light version is capable of delivering loads of about 800 kilograms within 100 metres of a target, and up to 20 kilometres from the release point. The largest variant can deliver a 19 tonne load with similar accuracy and, when dropped from 35,000 feet is capable of offset ranges up to 40 kilometres.

Even more promising, however, is the Semi-Rigid Deployable Wing (SRDW). Essentially a self-inflating hang glider constructed around a rigid internal frame, the SRDW uses servo-actuated wing warping for control. Already able to deliver 275 kilogram loads from 25 kilometres away, the SRDW is capable of speeds between 30 to 70 knots and has a wind penetration capability. Follow-on developments will allow carriage of up to 2250 kg. Eventually, by using an optional glide augmentation system adapted from ultra-light aircraft and unmanned air vehicles, offset ranges of 80 to 300 kilometres are possible²⁷. Future projections also call for improvements in delivery accuracy to within the 10 to 20 metre range²⁸.

material. Another benefit was perceived with the realization that the air force was not normally renowned for intentionally landing on lakes or other inhospitable terrain. Furthermore, if the landing area proved to be too well stocked with the opposition it was always possible to not get off the aircraft and depart again pretending you had an altogether more pressing engagement elsewhere. Finally this concept would give the Army a chance to drive their unbreakable toys with officially sanctioned recklessness in the proximity of our more delicate offerings.

From the airforce point of view however, this concept was far less alluring. Flying an aircraft is a hazardous enough operation at the best of times. Landing successfully at foreign airfields is often achieved more by luck than judgment (to the pilots of the tactical transport fleet there is a very fine distinction between a crash and a landing). Intentionally landing at an airfield occupied by fully armed enemy is virtually insane. For a while it seemed that the air-force would never get involved with such a concept until it was mentioned that the act of actually landing on foreign soil entitled those participating to full duty-free allowances. And so, on the promise of 200 cigarettes and a bottle of gin, TALO became a viable alternative to parachute assault.

It is a necessary prerequisite when landing an aircraft at an enemy held airfield to adopt a policy that exposes the aircraft to the least possible danger. An aircraft destroyed on the ground could well produce appalling casualties and block the landing area thus stalling the assault. It is the early phase of such an assault that is the most critical. Once the assault is underway the aim is to get sufficient force on the ground to suppress the opposition. After this has been achieved there must follow a build up of forces to maintain dominance over what could be a regrouping of the enemy. Finally the holding force needs to be built up to a level whereby they can continue to use the seized area for their own purposes.

The use of enemy airfields in this way is obviously advantageous to a military advance, and has been practiced by what was the Soviet Union using helicopters. In the early stages the risk to the aircraft conducting the assault is of critical

NOT AIRDROP BUT AIRLAND

The Army could have been forgiven for expressing themselves with less restraint, but soon entered into amiable negotiations with the air force on a subject called Tactical Airland Operations (TALO). The concept of TALO involves the landing of the soldiers at their destination whilst still in the aircraft obviously precluding the need to jump out whilst still airborne. TALO is therefore a direct insertion of soldiers and equipment into a target area to achieve its rapid seizure.

From the Army's point of view this had its advantages. Parachutes were getting increasingly expensive, and were being increasingly misemployed as a source of almost indestructible

²⁷ Andrew C. Braunberg, "Parachute Guidance Empowers Programmed Payload Placement," Signal, Vol. 50, No. 5, (May 1996), pp. 83-85.

²⁸ Harrington and Doucette, "Army After Next and Precision Airdrop," p. 46.

importance. To minimize this risk the aircraft has to be offloaded and airborne again in the shortest possible time. In such circumstances success is measured in seconds rather than minutes. "Operation Urgent Fury-Grenada" is a great example of an airland assault.

THE MALAYSIAN EXPERIENCE

THE GENESIS

Air logistics support in Malaysia was a British Army legacy started with several of their units being deployed to our country in several area such as Taiping, Muar, Kuching and Labuan. These units were to augment our forces in combating insurgents.

The first aerial delivery operation conducted in the country was during the insertion of the British led Force 136 during the onset of the Japanese occupation. After the Japanese defeat, we were against the communist insurgency. Due to our thick jungle environment, the British were aware of the requirement to conduct aerial delivery operations in support of their ground operations. For veterans, markers such as "Post Dixon" and "Post Tahan" and "Pensiangan" were some of the well known DZ or LP.

The techniques that were introduced was restricted in the early days, this was due to the cargo capacity of aircrafts that were available to us (the C-130 only arrived in Malaysia in 1975). Most of the Air Dispatch (AD) personnel before 1990 were known only to airdrop on a smaller scale (from the range of 100lbs up to 500lbs) and conducting underslung operations. However, like any other development within the army, the aerial delivery operations in Malaysia are progressing alongside. Thus, we are embarking into the heavy drop era.

THE HEAVY DROP ERA

During the eve of the development of Malaysian Armed Forces Rapid Deployment Force and the formation of 10th Para Brigade, the army acknowledged the requirement of AD assets within the formation. As a result, through mountainous negotiations and discussions, a Platoon from the RSC BN was detached and absorbed into the 10th Para RSC Coy.

Due to the requirement for a more effective conversion and continuous training. The army decided that the platoon must be shifted and co-located with an RMAF transport squadron. Hence, that platoon was attached to No 14 Sqn RMAF (Tactical Airlift Sqn) with a "Local Admin" status. In 1993, officially the platoon moved to the Subang RMAF Base with its first group of 1 Officer and 15 other ranks. And this marked the transition period from the ADS era towards the Heavy Drop Era.

As initial steps, the platoon benefits from the Aerial Delivery Equipment (ADE) procured by the RMAF in the C-130H-30R package. After conducting training that included ground and conversion training, the platoon airdropped its maiden loads, which were 8500lbs fuel drums, during the Ex Halilintar 94 in DZ Mahsuri, Langkawi. Therefore, the platoon is officially fully operational.

Only in 1995 the Royal Service Corps (RSC) had its first procurement of heavy drop equipment. The platoon later delivered its first airdrop load in Oct 95 in DZ Gong Kedak, the payload was 8-ft mass supply loads and several Container Delivery Systems (CDS). The total weight was 5000lbs. Ten years later, the platoons had successfully airdropped more than 1,000,000lbs all over Malaysia. The loads ranged from arty pieces of the Para Arty Regiment, RCL and HMG Korean Jeeps of the Para Support Company, Land Rovers, Supacat DZ Recovery Vehicles and Forward Surgery Team hospitals and these are some examples of the diverse payload tasked to the AD platoon. Today, the 10 Para AD Pl is the most equipped and best trained aerial delivery unit in Malaysia.

THE DRAWBACKS

Nevertheless, there were still some drawbacks within the Malaysian air logistics support system. The system was seen as imbalanced. As mentioned earlier, for the time being 10th Para Brigade is the most equipped and trained this is due to the nature of its operation which depends solely on the air as their source of mobility. This creates a wide gap on the capabilities to the other RSC AD units.

Most of the Army Field Command AD units are still operating using systems that are considerably obsolete and most of them remain operationally idle in terms of airdrop and with limited capabilities in terms of helicopter operations. In terms of doctrine and training, we are still within the process of upgrading and re-establishing our concept of providing air logistics support to the army.

THE SIGNIFICANCE

The significance of air logistics support for the Malaysian Army is as follows:

- „ **Alternative To The Logistics System.**

Our normal land based and sea based L of C are sensitive to threats, especially asymmetric threats and can be easily disrupted (as an example, during the Battle Of Khe Sanh in Vietnam, the air logistics support operation had successfully assisted the US Marines to overcome the Viet Cong Siege). With air logistics support, the disconnected forces are able to be sustained and maintained responsively. In the case of time sensitive operations, it will be a vital approach in providing a quick and decisive support to the forces deployed. Utilisation of the air logistics support assets are not limited to land or amphibious forces, thus it will give flexibility to the land force commander or the JFC itself.

- „ **Force Multiplier.** The capability to sustain forces in any kind of deployment will give an advantage to the commander. It will increase the deployment capability and force sustainability and as a result the force battle spectrum is virtually unlimited. As an example, the ability to position a mechanised battle group anywhere in Malaysia will enhance the operational capabilities.

- „ **Force Projection And Force Enhancement.** In relation to the previous mentioned findings, the ability to project and later enhance the capability can be achieved with the utilisation of air logistics support via the flexibility, speed and ubiquity, range and shock effect of airpower.

CONCLUSION

The success or failure of military operations will often be determined by the speed at which the required forces can be moved into position. Air mobility asset is a factor in the force multiplier equation that gives the importance of an airlift capability. While larger quantities of equipment and supplies can usually be deployed more economically by sea, rail and road, the slow speed of sea or surface movement systems just cannot compete with air logistics support when rapid responses are required by the land forces or the tactical commander.

The utilisation of air logistics support operation is imminent in the army's future battle concept. It was clearly demonstrated, after the Sipadan Island kidnapping incidents by the Abu Sayyaf Group, When we saw the requirement of the capabilities to rapidly deploy our troops in West Malaysia to the East during the force augmentation phase. Geographically and logically, only air logistics support operation can provide the vital means of a responsive, efficient and effective mode of transportation for projecting the force.

RECOMMENDATIONS

The solutions formulated that are required to be taken into consideration by the higher echelons of the army are as follows:

- „ **Organisation.** Restructuring and re-engineering of all RSC Bn AD Coy must be conducted aligned with the current Army's battle concepts. This also to re-determines the role and task and also the C2 of such units in relation to the Army's force projection 2000. The new organisation devised must be task oriented and modular in nature; this characteristics will enable them to be more flexible.

- „ **Doctrine and Training.** Re-aligning and studying of all related doctrines are to be carried out by specialised personnel. The doctrine must be aligned with the RMAF "Fixed Wing Air Mobility Force Operational Doctrine" and "C-130 Tactical Manual" and PBB-(MAL) 39 "Airborne

Operations" this is to enhance the doctrine to be multi service and "*Joint*" orientated. The training of AD must be revolutionised aggressively. Their training will cover all facets of air mobility (airdrop, airland and airmobile) it will diversify the capabilities of the AD organisations as the Army's element of "Force Projection Support".

„ **Techno-Research Orientated.** The RSC must look into the formation of an organisation (jointly operated with the RMAF) in overseeing and studying the current operation and also the future army's air mobility requirement. Through research done, enhancement and upgrades to the procedures used are to be obtained periodically. In relation, it will also upgrade the doctrines and SOPs of the techniques employed. This will slowly degrade our dependency to foreign countries thus increase the security of operational information. The best examples of such an organisation is Australia's "*Air Movement Training and Development Unit (AMTDU)*" and the US 82nd Abn Div "*Airborne Test Board*".

„ **Infrastructure.** The infrastructure presently available are considered to be impractical. Most of the AD units (except 10th Para AD Pl) are located far from the airfields or RMAF bases. By virtue, AD units must be co-located with the RMAF transport squadrons. This will enhance inter-operability and furthermore joint training can be conducted in achieving the highest standard of competency of both parties. In addition, the infrastructure must be able to accommodate the

"line rigging concept" and *"out-load procedures"*. This will further enhance the unit's capability in terms of time and capacity. Not to forget is the requirement for storage, due to fact that the AD equipments are mostly fragile and expensive, and the infrastructure must also accommodate first class storage facilities. This will prolong its shelf life and sustainability.

„ **Aircraft Availability.** The vital ingredient to the air mobility recipe nevertheless is the aircraft itself. Currently, the Army is depending on the RMAF's ten C130s (inclusive of 6 stretched C-130s), four CN 235, fifteen S- 60 Nuris and the Army's Alouette's. This is not a very impressive number comparing to the task being designated both to the Air Force and Army. The requirement of more transport aircraft that are able to provide both strategic and tactical airlift must be jointly justified among the service chiefs. As a recommendation the following are few aircrafts that are suitable for the MAF:

- Strategic Airlift. C-130J Hercules, AN-76 Illusjin, AN-124 Antonov and Airbus A400-M (Future Large Aircraft).
- Tactical Airlift. C-130J Hercules and C-27J Spartan

A paradigm shift must be taken on the unit's roles and tasks, from "*combat service support*" to "*force projection support*". This will upgrade the AD unit's image as a vital entity in an operation.

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Kapt Muzafer Shah bin Mosam Shah was commissioned into the Royal Service Corps on 29 Jul 1992 as a graduate officer. He possesses a Diploma in Microbiology from ITM. He has spent most of his service with 10 Bde Para. where he was the Air Despatch Platoon Commander for 8 years. He has obtained air despatch training locally as well as from overseas. Among the courses he attended are Basic Air Despatch (Australia), Low Velocity Airdrop System Training (US), Airborne Movement Officer and Airdrop Master (France), Currently he is a Staff Officer at 10 HQ Bde Para.

CHALLENGES OF INFORMATION WARFARE

— By : Brig. Jen. (B) Dato' M. Zaki bin Wan Mahmood —

INTRODUCTION

The use of information and communication technology (ICT) in conducting businesses in the public sector and defence agencies in a developing nation like Malaysia is ever increasing, following that of the private sector. ICT application has been mainly in the management of information. Since a decade or so ago the application of ICT is advancing to managing and controlling national resources and defence systems. The trends are clear that the paradigm shift is happening and no one nation will want to be left behind without the support of the said technology.

The development that has taken place in the ICT application has caused an increased exposure of information and resources control systems with threats of theft and destructive activities from irresponsible individuals and nations. While the use of ICT applications is necessary, protection of these systems is crucial. Development of system protective measures is to be concurrent with the introduction of ICT applications to ensure effectiveness of systems being installed.

Nation-states will, by necessity, have to have their own national information policies to further their own interest and to protect their assets. It has to be done. Some countries have implemented their policies, including state-sponsored espionage and electronic protectionism.¹ At the national level and for the armed forces, offensive capabilities are essential to assist in the preparation of the defensive activities, as well as a very good source of intelligence. These offensive and defensive activities in ICT application are called information warfare (IW) or information operations (IO). The ob-

jective of IW is to be superior in the field of ICT. Many reasons can be argued to prove that IW is inevitable, but the most obvious is one that it "will be waged because it can be".²

Militaries of many countries have been or are developing their capabilities in IW. Some have applied their capabilities on targeted countries and organisations. It is known that some nations, which have been actively developing their capabilities, have mounted their offensive operations onto some government and business systems. In some cases these IW organisations are obtaining commercial intelligence and are sharing it with their local industries. As a case study of nations developing IW capabilities, Christ Westwood says in his book; "Singapore is beginning to emerge as a potential information power, its national wealth already depends on the integrity of its vast array of information systems. Its leaders have recognised the potential and are clearly adapting strategies, which will make them leaders in the information age. The future information super powers could be smaller nations such as Singapore".³

Establishing IW capabilities and mounting IO are not without challenges. This article will discuss challenges faced by nations and armed forces in initiating IW organisations and dealing with threats against ICT systems. It will propose some solutions.

CHALLENGES

Difficulties of Governments. Without IW capabilities nations are deprived of sources of intelligence and all their information systems and command and control systems utilising ICT will be

² Ibid., p. 22.

³ Christ Westwood, *The Future is not what it used to be: Conflict in the Information Age*, Air Power Study Centre, RAAF Base Fairbairn, Australia, p 30.

¹ Winn Schwartau, *Information Warfare: Chaos on the Electronic Superhighway*, Thunder's Mouth Press New York, 1994, p 364.

defenceless. Governments will have to steer their nations towards having the necessary IW capabilities to ensure that their nations are able to survive through these IW threats. There are numerous challenges faced by governments and their agencies when countries are developing IW or IO capabilities. Some of the challenges that are faced by the governments are mentioned here. They are not exhaustive.

Understanding. One of the biggest challenges in providing secured ICT systems is in getting executives to understand that all ICT systems are so exposed to threats and that these threats are real. All the ICT systems are vulnerable to variety of threats despite all the necessary safety measures implemented. Executives and users have to understand that there are weapons available and these weapons and targets are carefully selected to achieve the attackers' objectives. System users on the other hand, will have to use all available tools to protect their systems. In many other cases executives failed to understand that weapons and tools could be embedded in the systems during their development. Sensitive systems, such as the command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) systems, must be developed locally by trusted people.

Organisational. Policies have to be developed and established to provide guidance to various organisations on actions, precautions and preventive measures to be taken. Specific organisations will be required to tackle these ICT threats. Staff in these organisations will be organised in cells to handle the appropriate scope of activities. In most nations these organisations and policies are not put in place appropriately and urgently.

Strategy. It is not easy to have strategies, doctrines and tactics diligently developed and regularly updated to be current with developing threats, technology and operational needs. The difficulty is caused by lack of able people to prepare these directives. Where possible these directives have to be ahead of threats.

Warning. Defence procedures to be developed have to have real time warning or indication of attacks taking place. A warning of detection of attacks before they take place is preferred. These detection measures have to withstand any attempt of tempering or circumvention.

Response. Having received a warning of any intrusion, responsible agencies will organise responses to save and salvage the affected system. The mechanism will be for immediate responses, at anytime of the day or night, throughout the year. It will be a challenge to establish efficient and effective recovery teams with forensic expertise.

Capability Development. Organisations to be established to handle IW will find that developing and sustaining capabilities in manpower and tools, to be efficient and effective in their jobs, are tough and require continuous efforts. Inability to cope with tasks in hand may be due to organisational weakness, lack of career prospects and inadequate budget allocation. Capable, reliable and willing local industries may be identified to be partners to the government IW organisations. Challenges in developing specific capabilities for defensive and offensive activities are unique, as mentioned below.

Defence. All ICT systems require protection from intrusions. Defences have to be developed at communications links and in databases. Systems will have to be able to protect themselves from information being stolen, destroyed or manipulated. The responsible organisation for the protection of these systems will need to have qualified staff equipped with latest technology and tools. All systems are to have their security measures approved by the authorised agency. Security audits are to be carried out regularly by the agency.

Offensive. Qualified staff will be required to organise offensive capabilities. They will have to be dedicated and innovative. Vast amount of imagination will be required to be successful in information offensive operations and offensive tools development. To develop successfully these offensive weapons and tools is an everlasting challenge. Some examples of these weapons and tools are shown in **figure 4**.

THREATS

Nature. To be able to establish effective IW capabilities, responsible government authorities will have to understand the dimensions of threats that may be mounted against ICT systems. The Nature

or scope of these threats has to be identified and assessment is then made to identify potentials of these threats. Their likelihood of happening and extent of damage will have to be estimated. Subsequently warning devices and countermeasures need to be developed.

Targets. Information systems and all other command and control systems of national interest are identified, whether they belong to the public or

the private sector. These systems are classified into categories of priority. These systems, which belong to national defence, will be accorded the highest priority. Next in order of priority will be the systems that contribute to the well being of the people, such as water and power supply as well as those that are managing and controlling public transportation. Details of possible targets are analysed in charts given in **figure 1** for peacetime and **figure 2** for wartime.

Ser	Attackers	Targets	Objectives	Aims
1.	Foreign militaries	C4ISR networks	Disrupt command and control, obtain intelligence	Prepare for military offensive
2.	Foreign national organisations	Governments, foreign, services, stock exchange, power and water supplies, telecommunications, finance and banking	Interrupt government, business, finance, transaction, and information flow	Political, economic and diplomatic gains
3.	Terrorists and criminals	Same as Serial 2	Same as Serial 2	For their demands to be met
4.	Private corporations database	Competitors R & D and business strategic information	Access to proprietary advantage	For competitive
5.	Unhappy, dishonest staff	Companies accounting and financial systems	Transfer to bogus accounts	Financial gain or revenge

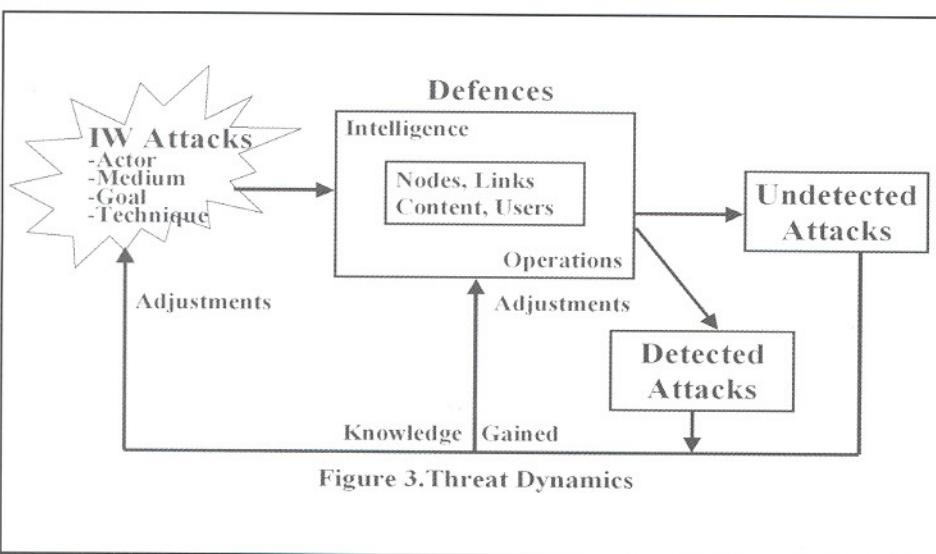
Figure 1. Possible Peacetime IW Attack

Ser	Attackers	Targets	Objectives	Aims
1.	Strategic	Governments, defence, foreign services, national financial, banking, telecommunication, stock exchange and air traffic	Stop national and defence administration and commerce to create fear and uncertainty	Political, diplomatic military, economic and to hold nation at ransom
2.	Regional	C4ISR, regional power grid, water supply, surveillance, early, warning and air defence	Severe communication links, disable central computer and national defence systems	Disrupt regional military C4SIR and destroy regional military defences
3.	Tactical	Tactical c4ISR, surveillance, weapons and air defence systems	Severe command and control, disable defence systems and equipment	Target specific system, isolate military forces for attacks

Figure 2. Possible Wartime IW Attack

Attackers. Some of likely attackers and their motives are given in **figures 1** and **2**. There are others that may be considered as attackers and need to be added to the lists from time to time. The lists are dynamic and are to be reviewed regularly. However, it is not always easy to detect and identify the source of an attack, or to determine if it is calculated and hostile.⁴

Threat Dynamics. Every attack incident is to be analysed to gain knowledge, to be used in future defences. Adjustments will have to be made to current warning system and existing security measures. In the diagram below, **figure 3**, the threat dynamics cycle⁵ shows adjustments have to be made guided by knowledge and experiences gained from past attack incidents.



COUNTER EFFORTS

Awareness. For counter efforts to be successful it is vital that the awareness is widespread, especially to the superiors and the senior management levels. Decision makers must be aware of the danger of having sensitive systems to be developed by foreign companies. It is essential that all system users are aware of the organisational aim. They have to understand, be familiar and be able to recognise threats when they are accuring. The

awareness will put them in best position to adhere to security procedures as well as to ensure others do the same. Awareness campaign will focus on system owners and decision makers. With their support then others will follow to pay closer attention to ICT security. The subjects to be stressed in the awareness programme will be security problems, threats, complexity of cyber attacks, effects from IW attacks and preventive measures.

Cooperation. Within a nation all ministries, agencies, departments and universities as well as local industries have to cooperate to combat IW attacks. All their resources and expertise are to be shared, collectively only then the nation have the strength to be ready for any eventuality and combat intruders. Within an organisation all

personnel are to be aware, involved and co-operate towards combating IW attacks. Managers have to take the lead to rally support and cooperation from system administrators, users and technicians. Human resource development and finance departments are to support by providing opportunities for knowledge upgrading and staff training.

Responsibility.

In coordinating efforts to prepare for IW attacks

the government will have to nominate ministries and agencies to be responsible for some functions. Visions, objectives and roles are then identified. There will be a central body to monitor, supervise and audit their activities. Modifications and adjustments are made as they progress to ensure effectiveness and efficiency.

Local Resources. Adequate resources are required to establish credible capabilities in IW. These resources have to be the nation's own, either that of the government or local industry, to ensure their dependability and reliability. Foreign resources are too risky to be employed in managing sensitive systemsand functions. Adequate qualified local human resource is of least problem. Qualified person-

⁴ Ibid., p. 49.

⁵ David S. Alberts, Defensive Information Warfare, Institute of National Strategic Studies, National Defence University, Washington, D.C., August 1996, p 34.

nel are available, but may be without sufficient relevant experience. Universities everywhere are training students up to postgraduate level in ICT security. These graduates are to be led by capable managers to function and gain experience in their specialisations. Hardware and software to provide security to IT systems are not readily available in most countries. These products are normally imported, of which their reliability is questionable. Governments of these nations should give encouragement and incentives to their local industry and universities to develop IT security products.

DEFENCES

Defence in Depth. The terminology is common to defence forces and normally it is used in the deployment of forces in defence operations. The concept of having rings of defences in the defence for a high priority target is applicable to defences for sensitive ICT systems against IW attacks. An attacker will find that he has to penetrate layers of defences before reaching the intended target of a system. While in the process of penetrating layer of defences his intrusion activities will be detected by the intruder warning system. Some of the measures recommended towards achieving defence in depth are as follows:

- „ To have separate systems for information flow and command and control.
- „ Information is kept in distributed databases.
- „ Information is pulled from databases and not pushed to users.
- „ Multiple and multi-layered defence measures.

System Design. IT system security measures have to be planned well in advance, together with system design and planning. In order to establish system security the following criteria are to be considered during system design:

- „ Joint development with local industry. Involvement of foreign industry will jeopardise system security.

- „ System robustness to withstand intrusions, interruptions and manipulation.
- „ Resiliency quality has to be inbuilt into the system, so that the system is able to function despite having been attacked.
- „ Overlapping systems are to be planned for, so that attacks will not be affecting an entire nation.
- „ In more important systems, such as air defence systems, duplications are necessary.
- „ Terminals and sites within a system that has been affected by an IW attack must be able to function in isolation while waiting for system restoration.
- „ Installing new releases and fixing system software require close supervision to ensure that existing security features are not affected or destroyed.

OFFENSIVE OPERATIONS

Human Resources. Personnel are an important asset in IW, especially so in offensive operations. They are most important in establishing capable and effective offensive teams. Members have to be all knowing in ICT and related technology and have the ability to apply knowledge to optimum effect. They have to be innovative and creative, continuously in search of knowledge and ideas to be prepared for any new challenge in the performance of their tasks. Tactics and weapons have to be developed and regularly reviewed, in order not to be outdated. In some cases, weapons are outsourced. Acquiring them may not be easy.

Weapons. To be effective in offensive operations weapons have to be sufficient, relevant and of state-of-the-art quality. These weapons are most effective if they are developed by the organisation's

⁶ Winn Schwartau, **Information Warfare: Chaos on the Electronic Superhighway**, Thunder's Mouth Press New York, 1994, pp 160 - 189.

⁷ Christ Westwood, **The Future is not what it used to be: Conflict in the Information Age**, Air Power Study Centre, RAAF Base Fairbairn, Australia, pp 62 -69.

Ser	Weapons	Descriptions
1.	Chipping	Embedded chip to fail, blow up or steal information
2.	Covert Channel	Ch inserted into system to get info undetected
3.	Electronic Jamming	Powerful transmission to block communications
4.	Electromagnetic Pulse Bomb	Detonates pulses to destroy electronics
5.	High Energy Radio Freq Gun	Shoots high energy radio freq to destroy electronic
6.	Internet Protocol Spoofing	To gain access to computer sys by fooling server
7.	Logic Bomb	Destructive instruction based on specific parameter
8.	Network Sniffing	Program/device to tap line to steal info
9.	Time Bomb	Destructive instruction based on specific time
10.	Nano Machine & Microbe	Robots that shut down electronic circuits
11.	Trap Door	Embedded in cipher to circumvent protection
12.	Trojan Horse	Hidden function programs that copy or destroy files
13.	Virus	Program that copies itself into other program
14.	Worm	Coyently inserted program that overwrites data

Figure 4. IW Weapons

own staff or by a trusted local industry. There will be occasions when there is no local expertise to develop some of these weapons, but they are only available overseas, such as electromagnetic bombs and guns. These weapons are not traded freely. Local capabilities have to be developed and incentives are to be made available to these experts. Other software weapons may be easily developed but will require delivery means. Examples of IW **figure 4**. Some of these weapons are discussed in the following books. Those at serial number 1, 4 and 5 are in Schwartau's book,⁶ and those at serial number 4, 5, 7, 11, 12, 13, and 14 are found in Westwood's book.⁷ Some of these weapons are more effective and easily made if they are embedded during system development, which are normally done by foreign defence system developers.

LOCAL INDUSTRIAL SUPPORT

Necessity. It is a necessity for a government, its agencies and its armed forces to have the support of the local defence industry to support in the development of IW capabilities. Firstly, it is the interest of the industry to have government machineries undisturbed and that the government is effective and efficient, especially in the business of na-

tional defence. The other reasons are that the industry will be more capable than the government departments and the armed forces in retaining their qualified and experienced human resource, providing incentives to staff, project funding, performing R & D, keeping up with technology and receiving and transferring technology.

Capabilities. The local companies to be selected must have staff members who have experience in working and developing defence systems. The companies must have adequate capabilities to support the government and the armed forces to acquire the necessary knowledge and tools to perform IW effectively. It is imperative that the companies must have a good percentage of their staff who are ex-government employees or who are ex-military personnel, supported by a good number of technically qualified staff in ICT, experienced in developing sensitive IT systems. The company must have a continuous human resources development programme in technology and IT security. These are areas, which are most suitable for IW applications. The following are some of the necessary criteria to the companies before they are to be considered to support the government and the armed forces in IW activities:

„ **R & D.** The companies are established with R&D departments.

„ **Qualified Personnel.** They are with sufficient number of qualified and experienced personnel in ICT and computer and system security

„ **Security.** The personnel are security vetted by the government.

„ **IW capabilities.** They must have some capabilities in IW, at least in the security measures.

„ **Technical Workshop.** They have workshops with capabilities in electronics and IT. These workshops are suitable in assisting in development of IW tools.

„ **Fund.** Companies have R & D funds to support in IW development.

Preparedness. The companies to be selected must have shown they are ever willing to contribute towards national defence self-reliance. They must have proof that they have taken initiatives to acquire total capabilities in developing sensitive and classified IT systems, with knowledge in system and computer security. Records have shown that they have contributed relentlessly towards improving the reliability of government and defence IT systems, even occasionally at no cost to the government. They have conducted and are forever prepared to conduct free IT technical training, especially in IT security, to personnel from the armed forces and other government agencies.

Consultants. Some of the companies may be appointed as consultants to the government and the armed forces. These companies will need to have senior qualified and experience staff members in ICT

development and security. Some senior staff members that have experiences in defence electronics, electronic warfare and IW or have written papers and delivered talks and lectures on these subjects are bonuses to the companies. Better still if there are some who have experience in formulating defence doctrines, policies and strategies.

CONCLUSION

Advantages of having IW capabilities are very clear. The danger to be without it is also glaring. The government needs these capabilities to ensure the well being of the people and the armed forces need them to ensure tasks of national defence entrusted onto them are effectively performed. All offensive and defensive activities mentioned above have to be effectively achieved by the government and especially so by the armed forces. Offensive operations are to obtain intelligence and as a pre-emptive or as a precautionary measure. Defensive activities are to protect systems from unauthorised intrusion. IW is a force multiplier. Nations can easily be superior by being superior in information. This may be achieved by having highly capable IW organisations.

Appropriate authorities have to give full support towards the establishment of IW capabilities. Developing these capabilities will be with numerous challenges. However, they are easily achievable through a continuous support from reliable, dependable, capable and willing local companies. There are local companies that have determination and willingness to offer and sustain their support in IW development. These companies, with numerous qualified technical personnel, facilities and funding, will be able to provide continuity and technological advancement to the government and the armed forces in IW development. Their senior staff members will facilitate them to be IW consultants to the government and the armed forces.

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BIOGRAPHY



Brig Jen (B) Dato' M. Zaki was an officer in the Royal Signal Corps of the Malaysian Army for 35 years until his retirement in 2000. On his retirement he joined Sapura as a consultant in defence communications and electronics. Currently he is a general manager in System Consultancy Services, a company involved in the development, maintenance and enhancement of command and control systems and EW systems.

Jen Zaki's last assignment in the Malaysian Armed Forces (MAF) was at the Malaysian Armed Forces HQ as the Asst Chief of Staff, Communications and Electronic. There he was responsible to manage, maintain, operate, enhance, train and ensure usage of the MAF C4I system. Now he is still doing those activities, but through a company that is doing the C4I system maintenance. Prior to the assignment at the MAF HQ, he was the head of the Comms and Electronic Section (Risik 4) at the Defence Intelligence Staff Division for six years.

He has a keen interest towards the development of military communications, information technology, electronic warfare and information warfare. He has contributed some articles in these fields to the Soroton Darat published in 1996 to 2000. He has been invited to speak regularly since 1990 at local military seminars and at the Armed Forces Defence College, the Armed Forces Staff College and the Army Institute of Communications and Electronics on these subjects. He presented papers locally at the seminars organised by the army and civilian organisations, as well as overseas, including at the Australian Institute of Professional Intelligence Officers annual seminar in 1995 at Sydney; the Conference of Senior Communicators at the United States Pacific Command in Hawaii in 1997 and 1999 and Soldier Technology and Battlespace seminars in Brussels in 2002 and 2003.

He was a member of the Panel of Experts (POE) in 2001 to 03, established by the National ICT Security and Emergency Response (NISER). The POE is an independent and interactive "think tank" to help the country navigate through the complexities of ICT security.

ELECTRONIC WARFARE DOCTRINE AND PHILOSOPHY-STRATEGIC AND TACTICAL

— By : Mej. Abdul Aziz bin Mahmud —

INTRODUCTION

"Acquiring EW capability is essential for Malaysian Defences and security. EW provides access to the battle space, degrades our enemy capability to attack and most importantly saves lives". That was the statement said by Dato' Sri Mohd Najib Tun Abdul Razak, Deputy Prime Minister of Malaysia at the Second Electronic Warfare (EW) Conference at Putra World Trade Centre (PWTC) on 27 Sep 2004. The statement indicated the importance of EW operations in the modern battlefield to support military commanders to win the war. Before any acquiring of EW equipment take place, the correct understanding of the EW doctrine and philosophy is vital to structure the EW development. It is also important to determine the level of involvement of command and control (C2) of EW assets to fulfil the EW mission. This paper, is going to see the difference in terms of doctrine and philosophy between Strategic EW and Tactical EW. This difference must be recognised by all levels of Command to ensure the proper planning and development of EW in the Malaysian Armed Forces (MAF).

D. Curtis Schleher (1986), in his EW book said that Strategic EW normally carries out Signal Intelligence (SIGINT) tasks. At tactical level the EW task is normally known as Tactical EW or just EW. The doctrine and philosophy between these two levels of operations will dictate the need of the human resource management and training in EW environment.

UNDERSTAND THE DIFFERENCE

THE RESPONSIBLE AUTHORITY

Another writer on EW, Richard Wiley (1085), said EW is one of the elements of the Intelligence

collection Agency. At the Strategic level, both military and civilian personnel carry out SIGINT. On the other hand, in most cases military personnel will carry out EW tasks. In the military set up there is a chain of command and events that take place in the EW process. In PPB (MAL) 1, Joint Operations Doctrine Publications, chapter 24, explains that the co-ordination of all EW activities in the MAF is the responsibility of The Defence Intelligence Staff Division (DISD). DISD will task and receive requests from the various organisations to carry out SIGINT collections against certain targets. Single services will implement and operate strategic EW plans in conjunction with DISD and tactical EW plans in accordance with respective service commander's directive or in accordance with the Joint Force Commander's operations. The services will then task their sites and then the SIGINT process begins. The information is then passed back to the service and then onto the DISD. The DISD after approval by the Chief of Defence Force (CDF) will inform the government of the situation or may be in a position to pass this information to other parties. These other parties will no doubt be a friendly force or another government department that does not have the capabilities or facilities to carry out their own SIGINT operations.

ELECTRONIC WARFARE DEFINITIONS (ESM vs SIGINT)

In order to understand the full application of EW operations we have to familiarise with the EW terminology and definitions. What is SIGINT and what is the difference between SIGINT and EW? Most of the books and references available written by EW experts give almost the same EW definitions. The NATO Standardization Agreement – AAP 6 for example defines SIGINT as a category of intelligence information comprising all Communications Intelligence (COMINT) and Electronic Intel-

ligence (ELINT). COMINT can be defined as technical and intelligence information derived from foreign communications by other than the intended recipients. ELINT then can be defined as technical and intelligence information derived from foreign, non-communications electromagnetic radiation emanating from other than nuclear detonations or other radioactive sources.

John Pritchard the EW Instructor form Dundridge College, UK explained that EW can only be conducted successfully if friendly forces have a good intelligence picture of the enemy's capabilities including signals intelligence (SIGINT). SIGINT is therefore considered to be an intelligence function rather than an EW function. SIGINT is conducted at the strategic level of operations. Nevertheless, before considering EW applications, it is necessary to have an understanding of how the information on which EW depends so heavily is obtained by the strategic EW agencies. The aims of SIGINT are:

- „ Compile a database of the enemy's electronic order of battle (EOB).
- „ Gain accurate information on the enemy's equipments and state of technology.
- „ Acquire knowledge of any limitations or weaknesses in enemy systems.
- „ Reveal any changes in the enemy's strategy.

Now, let us look at what EW is all about. According to David Adamy (2001), EW is defined as the art and science of preserving the use of the electromagnetic spectrum for friendly use while denying its use by the enemy. The definition is more focused to the military application of the Tactical EW. In modern warfare today any adversary is likely to make full use of the full range of communications, surveillance and weapon systems operating across the electromagnetic spectrum, where both sides will attempt to dominate that spectrum by all means possible. Therefore a complete analysis of the threat must be undertaken. EW should be viewed as a tool for use with other tools available by battlefield commander to achieve mission objectives. The element in EW that has common task with SIGINT in Strategic EW is Electronic Support Measures

(ESM). ESM explained by PPB (MAL 24), encompasses the interception, identification, location, analysis and recording of EM Spectrum from the enemy for the purpose of exploiting that emission in military operations. Rick Morris, on EW communication expert from THALES Universite Ltd during his lecture to Malaysian EW students at Dundridge College, UK had highlighted a few differences between in SIGINT and ESM operations. These are environment, duration of times, level of conduct, security measures, response time, the nature of EW operations and hardware/software configurations.

Base on the explanation above, it can be noticed that the activities of SIGINT (Strategic EW) and ESM (Tactical EW) have commonn features in exploiting the frequency spectrum but are dramatically different in certain aspects mentioned above. The differences in SIGINT and ESM requirements are explained detail in the following topic.

THE ENVIRONMENT

Strategic EW has always been carried out in peace time. At present, Malaysia has no conflict or war with onther country but the SIGINT activity continues to take place by the Strategic Security Agency. This activity is not new to us since it has been conducted by almost all countries in the world especially countries likes the United States, Russia and other developed European Country. Why do we need to conduct SIGINT during peace time? One of the answers is to develop an adversary EW threat library so that can be used during war or conflict. Sun Tzu coated in his famous Art of War, that to defeat the enemy is to know them well through effective employment of an agent.

As opposed to Tactical EW, Strategic EW is always been carried out in hostile/war environments. In the Malaysian Armed Forces as experence in PPB (MAL 24) EW operations are carried out at Operational level by the Joint Force HQ. All the EW data gathered about a particular country will be passed down to the operational and tactical commander deployed at land, sea and air. The commander on the ground will be able to update his own EW threat library to enhance his own EW capability during the operation.

awareness developed is for the military commander to appreciate and take offensive action against them.

LEVEL OF CONDUCT

On the civilian side of SIGINT, the main overall command of SIGINT sites is placed under the Government. They are similar to the DISB and will have a hand in the military SIGINT collection. They will pass tasks and requests for SIGINT collection to the Strategic HQ. The Strategic HQ in turn will pass these requests to SIGINT sites wherever they may be. The sites carry out the collection and pass the intelligence to the Strategic HQ for further in depth analysis and then the information is passed to the Government. What the Government does then is entirely up to itself. There are various Strategic sites around the world and appear in the most unusual places. For example the UK General Communications HQ (GCHQ) is a Civil Service Department under the ministerial responsibility of the Secretary of State for Foreign and Commonwealth Affairs which provides government departments and military commands with signals intelligence (SIGINT) in accordance with the UK national security, defence, foreign and economic policies.



Figure 2. Ukrainian Interception Site. Is this strategic or tactical and who is coordinating the operation?

In Tactical EW, the command of EW operations is in the hand of the military commander. This is where most of the EW personnel from the Army, Navy and Air Force are involved. The procurement of the EW asset and doctrine has developed intensively from time to time in order to improve EW capability. During deployment to an area of operation, the military commander will use the organic EW asset to



Figure 1. "Elephant Cage", high frequency radio interception antenna (AN/FLR9)

THE DURATION OF ANALYSIS

The duration to analyse the information gathered could be different between strategic and tactical EW. Strategic EW involves long-term analysis. In the peace time, the process information gathering will undergo various steps that involve from the EW site up to government level. The time to analyse the information by the EW site is lengthy and needs to go through various military and civil departments. The end product of the analysis process is at Prime Minister Office. Through his Majlis Keselamatan Negara (MKN) committee the decision and action taken to problem arises will be handled appropriately.

Tactical EW involves short-term analysis. It is for the military commander to make an appreciation and decision to deal with the incoming threat in the battlefield. In naval and air environments, the decision making process needs to have a very fast Electronic Support Measures (ESM) system to develop situation awareness integrated with an Electronic Counter Measures (ECM) system to engage with the incoming missile. It needs about less than 10 seconds to respond in the action. For the Army, the same action is required to deal with a threat from guided missiles and Electro Optic missiles. At the Radio Band of the Electromagnetic Spectrum (EM) that needs the ESM ground EW asset to collect and analyse the information requires a longer time to develop an adversary's Electronic Order of Battle (EOB). The Battlefield situation

carry out his operations. This may not be a hostile/war deployment. In PPB (MAL) 1, Joint doctrine specifies that the overall formation in charge of EW aspect in joint operations would be the JEWCC (Joint Electronic Warfare Control Centre). At various component levels under the Joint Force Commander (JFC) the EW operations will be handled by various EWCC. The terminology used for EWCC at component level up to the services level but the most important thing is it does the same function; coordination. They will be closely working with J2 and J3 staff. The EWCC will have further sub-centres down the chain of command depending on the size of the operation. In Army environment, a DEWO (Divisional Electronic Warfare Officer) will be establishing at the Div Headquarter when deployed in the battlefield. He is the liaison between the EWCC and the EW sites. Information is passed from the sites to the DEWO and then onward to the EWCC for planning and action. During hostile/war deployment, the EWCC will have additional contact with the government via CDF. In the case of the Falklands War, the EWCC was passing information directly to the UK Prime Minister. The actual scenario that happened was that the war fought at Falklands but the planning and decision-making was done by the War Room in the UK. For Air and Naval operations the use of EW assets which are organic to the aircraft and ship platform is vital to ensure the protection of the platforms in order to achieve the given mission.

The main objective of EW is to produce an enemy EOB, to update databases, to send out timely reports, to carry out quick time analysis, to provide intelligence to commanders and give the cue other intelligence gathering assets.

SECURITY MEASURES

Strategic EW involves the highest level of security protection. This is because the SIGINT activities are normally being carried out covertly. For example, the interception Capabilities 2000 article revealed that under operation SHAMROCK, the US National Security Agency systematically obtained information from the cable traffic of major telecommunications companies world wide and remained unknown for 30 years since 1945. In the Malaysian environment, all these kinds of operations plus other military intelligence sources will be coordinated by

the DISD. Since it is part of the loop of intelligence network so no doubt it must have high level of security protection.

Tactical EW has a lower level of security protection than Strategic EW. The security level is not high because reaction time for Tactical EW is fast and the breaching of the information and location is useless to the adversary to act upon because of obsolete information. Fillope Neri (2001) explained, at tactical air scenario the course of action taken by the pilot to detect an approaching missile must be fast enough to counter the threat. At ground battlefield, the fast reaction also needs to encounter the threat posed by the enemy surface-to-surface missile. Therefore the security must be low to allow fast reaction time. If we put high security protection to the command and control (C2) system it will jeopardise operation tempo and offensive action against enemy.

NATURE OF EW OPERATIONS

Strategic EW carries out ESM tasks (mainly) at the strategic static site. ESM task can be conducted from all kinds of platform such as fishing vessels, strategic aircraft, ground receiver station and satellites. Why does strategic EW carries out mainly ESM tasks? ESM operations provide a source of information required for immediate decisions involving ECM and EPM planning. Since ECM and EPM (partly) are active in nature they will course as hostile acts by the adversary country if they come to know about it. This action will cause conflict between both countries. Therefore, it is important for the strategic EW mainly carry out ESM tasks to obtain information during peace time from adversary communication and non-communication network. Information gathered will be analysed, EW reports produced and databases updated. This process is in slow time and gives the ESM team more time to conduct their operations, which gives the analysts more time to see what the overall situation is.

Tactical ESM or Electronic Warfare is conducted in support of a major unit in the field during the times of hostilities or war. ESM provides a valuable source of information that would enable any commander in his decision-making process during the Electronic

Warfare battle against his enemy. The ESM team has to report and brief the commander straight away so that the commander is kept up to date with the current situation. Throughout my experience in carrying out EW jobs the commander will be surprised to see what EW personnel can do to help him in the decision making process in the battlefield and appreciate what can do.

What goes on during ESM operations? The elements that make up an ESM operation are search, intercept, direction finding and analysis. There are two types of search; general search and specific search. The search task is conducted by the EW operator for ground and shipborne platform to a particular frequency band for adversary communications activity. In the air force perspective this activity of radio communications search is not popular by virtue of service differences. For the upper part of the radio band, which involve adversary radar and EO activity the ESM is normally conducted by the navy, air force and partly by the army ELINT EW ground stations.



Figure 3. Ground EW Intercept complex deployed

The main tactical targets are in voice and one of the main problems is the language capability of the operator. Once a target has been found on either of the search processes it is then passed down the chain to the intercept position. It is at this stage that the target of interest is exploited to its fullest. The intercept operator will have more time dedicated to a particular network, thereby giving it his full attention. If the signal has special EPM measures the operator must be able to demodulate the signal as required before the analysis team can process further. Besides the the COMINT operator, ELINT EW personnel also will carry out their his task by

immediately checking with their threat library signal parameter to identify the target before arranging for counter measures.

Identification of the enemy system is not complete if we don't know where he is located. This is where direction finding comes into the ESM operation. Direction finding gives the Electronic Warfare unit the ability to locate the enemy and providing the commander with valuable information. The Army DF asset normally needs to have at least 2 sensors to obtain the bearing. For the Navy and Air Force, the DF is normally carried out by the DF system on board the airborne or shipborne platform and coordinated with their overall ESM system. The results are then fed back to the controller who in turn passed the results to the analyst. The direction finding in radar and EO band application normally comes with range, elevation and height of the target in one single identification task. The counter measures to the approaching threat will be done electronically or manually based on the information gathered.

Analysis is also a very important part of the ESM operation. Here the intercepted targets and DF results are collated and gathered together for in depth study by the analysis team. A good analyst will be able to produce a very good overall picture of a network. It is here that EOB's, ORBATS, enemy strengths, intentions, and capabilities are found. In normal operations the analysis team should have an up to date database to work on which they will add to as the ESM operation goes on.

CONCLUSION

SIGINT assets are typically controlled by the national level intelligence organisation that is responsible for the long term strategic planning. SIGINT intercepts are normally recorded during the mission and subsequently analysed in a ground facility. The resultant intelligence is then distributed as required to meet strategic objectives. The time between collection and reporting of SIGINT information may vary from several hours to several days, depending on the quality and quantity of information collected, the level of analysis required and efficiency of the ground analysis facility.

EW, through its ESM assets pass information directly to the tactical commander in charge of mili-

tary operations. The “real time” nature of the tactical intelligence provided by ESM assets permits the tactical commander to assess the military situation as it develops and immediately directs the appropriate responses. ESM intercepts may also be recorded, analysed after the mission and used to supplement SIGINT information during peace. The threat library will be updated from time to time and will be used of to supplement tactical ESM during conflict/war. Strategic EW carries out ESM tasks (mainly) and tactical EW will use all its three divisions of EW to support the operation.

RECOMMENDATION

The difference between Strategic and Tactical EW with regards to EW Doctrine and Philosophy must be understood by the organization involved in order to conduct EW development and activities. Strategic EW normally carries out SIGINT tasks and at tactical level the EW task is carried out by ESM. Both are common in exploiting the frequency spectrum but are dramatically different in terms of environment, duration, level of conduct, security measures, response time, nature of EW operations and hardware/software configurations.

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Mej Abdul Aziz bin Mahmud was commissioned in the Royal Signal Regiment on 11 Apr 1981. A graduate form Armed Forces Staff College and hold a Master in Management (Distinction) in 2002 from the University of Malaya. He served in many units in the Signal Corps particularly EW units and has years experience in SIGINT operations. He held various appointments throughout his career in the MAF namely as Officer Commanding of 4 Royal Signal Squadron (Mech), Officer Commanding of MALCON IV Signal Squadron, Second in Command of 1st Royal Signal Regiment, Joint Communication Staff Grade Officer 2 and Instructor in PESAMA and Staff Duties Instructor in IPDA. Currently he is serving as an Electronic Warfare Instructor in MAF EWTC.

ISLAM HADHARI DAN KEKUATAN PERTAHANAN

By : Kapt Nadzri bin Musnman



PENDAHULUAN

Islam Hadhari yang menjadi dasar baru negara ini adalah bertujuan membentuk satu imej masyarakat Islam dan negara ini sebagai negara Islam yang membangun dengan mempunyai peradaban yang dicanai dengan ad-Deen Islam serta memfokuskan kepada mempertingkatkan mutu kehidupan melalui pembangunan insan, penguasaan ilmu, pembangunan kesihatan dan pembangunan dari sudut fizikal. Justeru itu, Islam Hadhari yang amat mementingkan penguasaan ilmu dan pendidikan ini perlu dilaksanakan dengan penuh perancangan dan pelaksanaan yang berterusan dan mampu merungkai permasalahan yang wujud dalam masyarakat.

Sepuluh prinsip utama Islam Hadhari yang telah digariskan oleh Yang Amat Berhormat, Dato' Seri Abdullah Haji Ahmad Badawi, Perdana Menteri Malaysia memerlukan kepada penjelasan yang meluas dan mendalam untuk menghasilkan satu konsep yang mampu dilaksanakan dan diterima oleh seluruh masyarakat Malaysia. Sepuluh prinsip tersebut ialah:

- „ Keimanan dan ketakwaan kepada Ilahi.
- „ Kerajaan adil dan beramanah.
- „ Rakyat berjiwa merdeka.
- „ Penguasaan ilmu pengetahuan.
- „ Pembangunan ekonomi seimbang dan komprehensif.
- „ Kehidupan berkualiti.
- „ Pembelaan hak kumpulan minoriti dan wanita.
- „ Keutuhan budaya dan moral.
- „ Pemeliharaan alam semula jadi.
- „ Kekuatan pertahanan.

Apa yang dapat dilihat dari sepuluh prinsip ini, kesemuanya mempunyai kait-mengait di antara satu sama lain dan memerlukan kepada perubahan yang menyeluruh dalam melaksanakannya. Oleh yang demikian, untuk merealisasikan Islam Hadhari ini, pendekatan yang bersepadu perlu dilaksanakan meliputi pendekatan politik, pendekatan pemikiran, pendekatan intelektual, pendekatan akidah, pendekatan dakwah dan pendekatan ketamadunan atau Hadhari. Kegagalan untuk menggarap keenam-keenam pendekatan ini akan menyebabkan masyarakat atau umat yang merupakan sasaran kepada pembentukan masyarakat Hadhari akan terkeliru dan akhirnya menolak konsep Islam Hadhari. Ini adalah¹ kerana titik tolak perubahan tidak boleh bermula melalui kuasa politik sahaja, tetapi

¹ Prof. Dr. Mahmood Zuhdi Hj Abd Majid (2004), *Kertas Kerja: Memahami Islam Hadhari*, API UM, h.11.

lebih menyeluruh daripada itu yang bermula dengan individu, masyarakat dan ummah dan kemudian barulah kuasa atau sistem yang membina tamadun yang dicita-citakan.

ISLAM HADHARI SATU PENGENALAN RINGKAS

Pelbagai tanggapan yang telah diberikan apabila konsep Islam Hadhari diperkenalkan sehingga ada yang menyatakan ia adalah agama atau mazhab baru yang bertujuan untuk meraih sokongan kepada golongan yang tertentu. Memang benar, Islam adalah Islam malah tiada penisihan lagi dan telah termaktub melalui firman Allah: " Sesungguhnya al-Din di sisi Allah adalah Islam".² Ini adalah satu ketetapan yang tidak boleh diubah sama sekali oleh manusia. Pengistilahan seperti ini telah lama dibahaskan oleh Muhammad Abu Zahrah dengan menyatakan timbulnya sifat tertentu lalu disandarkan kepada Islam seperti Islam Khawarij, Islam Syiah, Islam Sunni, Islam Sufi dan pelbagai sifat lagi malah bangsa juga kadang-kadang disandarkan kepada Islam juga seperti Islam Arab, Islam Melayu, Islam India dan Islam Pakistan.³ Apabila dibincangkan dengan aliran pemikiran semasa atau moden pula, beberapa istilah telah muncul dan disandarkan kepada Islam itu sendiri sebagai contohnya Islam Tradisional, Islam Modernis, Islam Reformis,⁴ dan Islam Liberal (golongan yang bertuhankan akal).

Pelbagai tafsiran terhadap Islam telah menghasilkan kecenderungan dan pendekatan tertentu terhadap umat Islam sehingga melahirkan kumpulan atau kelompok tertentu yang memperjuangkan pendekatan yang difahami. Pendekatan dan kecenderungan yang mereka bawa ini adalah untuk membezakan satu kumpulan dengan kumpulan yang lain. Walau bagaimanapun, tafsiran dan kecenderungan yang mereka fahami ini tidak menyentuh secara mutlak terhadap nas-nas total dalam Islam.⁵ Oleh yang demikian, Islam Hadhari yang diperkenalkan oleh kerajaan hanyalah satu pendekatan dan kecenderungan untuk

membawa umat Islam Malaysia menghayati tamadun Islam yang bertunjangkan kepada penghayatan ilmu. Sebagaimana manusia yang mempunyai roh dan jasad, tamadun juga mempunyai roh dan jasadnya yang tersendiri. Jasad bagi tamadun tergambar pada kemajuan-kemajuan materialnya yang berupa pembangunan, industri dan segala sesuatu yang berhubungan dengan kemakmuran hidup dan kesenangan kehidupan dunia. Manakala roh bagi tamadun ialah kumpulan akidah (ideologi), kefahaman konsep, nilai, adab dan tradisi yang boleh dilihat dalam perhubungan sesama manusia.⁶ Tamadun moden masa kini yang berhasil melalui pencanaian yang dibuat oleh pihak Barat telah menyebabkan bibit-bibit kemusnahan yang teruk terhadap kehidupan manusia dan hakikat ini telah diakui sendiri oleh para cendekiawan barat. Musnahnya nilai-nilai kemanusiaan, keruntuhan akhlak, kemusnahan institusi keluarga, kegelisahan jiwa, kecelaruan jiwa dan wujudnya jenayah dan ketakutan yang melampau adalah fenomena yang berlaku kesan dari tamadun materialistik yang dibawa oleh Barat. Oleh yang demikian, tawaran yang perlu diberikan kepada manusia ialah tawaran tamadun Islam yang lebih komprehensif dan inovatif kerana menepati fitrah manusia apakah lagi Islam itu sendiri diturunkan oleh Pencipta manusia.

PERTAHANAN ZAMAN RASULULLAH

Contoh terbaik untuk mengaplikasikan pertahanan dari sudut Islam Hadhari ialah dengan melihat apa yang dilaksanakan dan diamalkan oleh Rasulullah s.a.w. dalam membina kekuatan yang merangkumi dan mencakupi keseluruhan elemen-elemen kehidupan pada zaman tersebut. Proses pendidikan yang dilaksanakan oleh Rasulullah s.a.w. telah menghasilkan para sahabat yang mempunyai kekuatan akidah yang teguh, kekuatan ikatan persaudaraan yang kukuh dan mempunyai azam dan cita-cita yang jauh. Pendidikan yang dilaksanakan oleh Rasulullah s.a.w. adalah dengan mempersiapkan individu Muslim dengan melaksanakan pentarbiahan (pendidikan) menyelesaikan kehidupan manusia melalui metode tarbiah secara komprehensif dan tidak mengabaikan sedikit pun sama ada aspek fizikal, intelektual,

² Al-Quran, al-Maidah (5):3.

³ Muhamad Abu Zuhrah (t.t), *al-Madhab al-Islamiyyah fi al-A'qaid wa al-Siyasah*, Kaherah, h.10-22.

⁴ Abdul Rahman Hj Abdullah (1987), *Pemikiran Islam Masa Kini, Sejarah dan Aliran*, Kuala Lumpur, Dewan Bahasa dan Pustaka.

⁵ Prof Madya Mahamad Kamil bin Hj Abd Majid (2004), *Kertas Kerja: Islam Hadhari Dari Perspektif Islam*, APIUM, Kuala Lumpur, h.7.

⁶ Dr. Yusuf al-Qardawi (1999), *Tamadun Islam Alternatif Masa Depan*, Ustaz Juanda Haji Jaya (terj), Maktabah al-Qardawi, Selangor, h.12.

spiritual, kehidupan material, kehidupan batin dan seluruh aktiviti manusia di dunia ini.⁷ Hasil yang diperoleh melalui proses tersebut amatlah mengagumkan kerana lahir para sahabat yang mempunyai teladan yang patut ditiru oleh generasi kemudian. Hakikatnya para sahabat yang dididik oleh Rasulullah s.a.w. bukan sahaja menjadi seorang pendakwah tetapi pada masa yang sama menjadi tentera-tentera yang mengibarkan bendera ad-Deen Islam ke seluruh alam.

Dari sudut ketenteraan secara khusus, Rasulullah s.a.w. telah membahagikan penyusunan pengoperasian angkatan tenteranya kepada beberapa jabatan iaitu:

- Jabatan Barisan Hadapan (Jabatan yang paling penting) meliputi:
 - Bahagian Strategi dan Taktik Peperangan.
 - Bahagian Syura.
 - Bahagian Memperkuatkan Kekuatan Tempur.
 - Bahagian Operasi, Latihan dan Persenjataan.⁸
- Jabatan Tadbir dan Logistik yang meliputi:
 - Bahagian Pengurusan Harta Rampasan.
 - Bahagian Perkhidmatan Perubatan.

Kedua-dua jabatan ini tidak dipisahkan dan tidak dibezakan dari sudut tanggungjawab untuk berperang. Ini bermakna di bahagian mana pun seseorang itu berada, kewajipan mengangkat senjata untuk berperang adalah sama. Rasulullah s.a.w. telah membuktikan kepada dunia, betapa kekuatan persenjataan sahaja adalah tidak mencukupi jika sekiranya anggota tentera terdiri daripada mereka yang lemah dari sudut spiritual dan mental serta fizikal. Pembinaan yang telah dilaksanakan oleh Rasulullah s.a.w. untuk mewujudkan roh jihad yang membawa di kalangan para sahabat apabila keluar berjihad adalah dengan memulakannya dengan pembinaan diri anggota tentera itu terlebih dahulu dan disertai dengan

kemahiran peperangan.⁹ Inilah kaedah yang telah dilaksanakan oleh Rasulullah s.a.w. sehingga baginda dan para sahabat (tentera-tentera Islam) mampu memenangi peperangan penting walaupun mempunyai kekuatan persenjataan yang terbatas.

Walau bagaimanapun, apa yang dinyatakan di sini bukanlah Rasulullah s.a.w. menolak sama sekali keperluan pertahanan dari sudut persenjataan. Apa yang dilakukan oleh Rasulullah s.a.w. ialah keselarasan dan keperluan kedua-duanya untuk digabungkan bagi menghasilkan natijah yang maksimum. Malah Rasulullah s.a.w. mengarahkan para sahabat untuk membuat peralatan perang seperti pedang dan perisai agar dapat digunakan oleh tentera Islam apabila berlakunya peperangan. Gambaran ini dijelaskan melalui firman Allah s.w.t dalam surah al-Hadid ayat 25 yang bermaksud:

“Dan kami telah menciptakan besi dengan keadaannya mengandungi kekuatan yang handal serta berbagai faedah bagi manusia. (Dijadikan besi dengan keadaan yang demikian, supaya manusia menggunakan faedah-faedah itu dalam kehidupan mereka sehari-hari) dan supaya ternyata pengetahuan Allah tentang orang yang (menggunakan keuatannya itu untuk) menegak dan mempertahankan agama Allah serta menolong rasul-rasul-Nya, padahal balasan baiknya tidak kelihatan (kepadanya); sesungguhnya Allah Maha Kuat, lagi Maha Perkasa”.

Ayat ini diakhiri dengan menunjukkan dua sifat Allah iaitu Yang Maha Kuat dan Maha Perkasa yang menjadikannya asas bahwasanya Allah s.w.t amat menyukai para hambanya yang beriman dan yang kuat serta perkasa.¹⁰ Apabila dihayati, maka kekuatan yang perlu dibina oleh umat Islam dengan apa yang dilakukan oleh Rasulullah s.a.w. adalah dengan menggabungkan elemen-elemen yang mempengaruhi kehidupan manusia tanpa meninggalkan walau sedikit pun elemen tersebut dan seterusnya dikaitkan dengan kekuasaan Allah s.w.t. Lihat sahaja tentera Islam yang bertawakal kepada Allah s.w.t semasa berlakunya peperangan Badar dengan menaruh harapan dan keyakinan melalui doa yang dipohon setelah melakukan usaha-usaha yang berterusan untuk mengumpulkan kekuatan sehingga Allah s.w.t menurunkan pertolongan-Nya. Ironinya, keangkuhan yang ditunjukkan oleh tentera-

⁷ Muhammad Qutb (1401H0, *Manhaj at-Tarbiyyah al-Islamiyyah*, Juz 1, Dar al-Syuruq, Kaherah, h.18.

⁸ Dr. Muhammad Dohoir Witr (1986), *al-Idarah al-A'skariyyah fi Hurub al-Rasul Muhammad saw*, Matba'ah ar-Rashid, Halab, h. 107-108.

⁹ Dr. As-Sayyid Muhammad As-Sayyid Nuh (1991), *Manhaj ar-Rasul fi Gharsi Ruh al-Jihad*, Mesir: Dar al-Manar al-Hadithah, h.21.

¹⁰ Muhammad Jamaluddin Mahfuz (2003), “Pertahanan Ilmu & Persiapan”, Muhamad Ramzi Omar (terj), Kor Agama Angkatan Tentera, Kuala Lumpur, h.13.

tentera Musyrikin Mekah menjadikan mereka takbur dan mengalami kekalahan yang memalukan.

KONSEP KEKUATAN PERTAHANAN

Islam amat mementingkan ilmu pengetahuan dan ilmulah yang menjadi teras kepada Islam Hadhari yang diperkenalkan oleh Kerajaan Malaysia. Justeru itu, kejahilan yang melanda umat Islam perlu diselesaikan khususnya kejahilan terhadap hakikat sebenarnya tentang Islam. Kejahilan terhadap Islam pada umumnya adalah disebabkan proses pendidikan yang kurang tepat menurut prinsip-prinsip pendidikan yang berdasarkan kepada al-Quran dan al-Sunnah. Kejahilan terhadap hakikat Islam akan menyebabkan lahirnya pemikiran-pemikiran yang menodai dan mencemarkan kemurnian Pemikiran Islam.¹¹ Mengintegrasikan ilmu adalah jawapan kepada kejahilan tersebut bagi melahirkan umat Islam yang berfikir secara kritis dan kreatif. Lihatlah kesungguhan Imam as-Syafie dalam menentukan jumlah maksimum haid wanita dengan membuat kajian lapangan melalui soal selidik yang dilakukan di Kota Baghdad sehingga beliau membuat keputusan bahawa jumlah maksimum haid bagi seorang wanita ialah selama 15 hari. Ini adalah lahir dari kemampuan yang dimiliki oleh beliau dengan mengintegrasikan ilmu pengetahuan agama yang diperolehnya dengan kaedah kreatif yang dibuat olehnya tanpa meninggalkan sama sekali prinsip-prinsip ilmu pengetahuan Islam yang diperolehnya.

Konsep kekuatan pertahanan juga tidak lari dari ilmu dan ia adalah langkah pertama untuk menyediakan kekuatan. Sebagai contohnya, peredaran zaman yang berlaku, menyebabkan keperluan untuk menyediakan kekuatan peralatan dan kelengkapan perang yang sesuai dan sejajar dengan zaman tersebut adalah amat diperlukan. Pengabaian terhadap perkara ini merupakan satu kesalahan yang perlu dipikul oleh umat Islam. Fenomena yang berlaku kepada dunia Islam saat ini ialah; keterbergantungan terhadap teknologi dan ilmu pengetahuan khususnya kemahiran membuat peralatan pertahanan kepada negara-negara lain telah mengundang pelbagai perspektif negatif

terhadap dunia Islam. Dunia Islam memerlukan sebuah Negara Islam yang mempunyai keupayaan menyeluruh untuk membangunkan kelengkapan pertahanan yang memenuhi tuntutan zaman.

Keupayaan untuk membangunkan pertahanan yang kukuh dari sudut peralatan pertahanan memerlukan penyelidikan yang berterusan, pelaburan kewangan yang banyak dan komitmen yang menyeluruh dari semua pihak. Kewajipan membuat persediaan pertahanan ini telah dinyatakan oleh Allah s.w.t melalui firmanya di dalam surah al-Anfal ayat 60:

“Bersiap-sedialah untuk menghadapi mereka (musuh) dengan apa sahaja kekuatan yang kamu mampu dan dari kuda-kuda yang ditambat untuk berperang (yang dengan persiapan itu) kamu dapat menggerunkan musuh Allah dan musuh kamu serta orang-orang lain yang selain dari mereka yang kamu tidak mengetahuinya, sedangkan Allah mengetahuinya”.

Justeru itu, apabila Islam Hadhari diperkenalkan dan salah satu darinya ialah Kekuatan Pertahanan, ia tidak dapat lari dari menyediakan kekuatan dan keupayaan peralatan pertahanan bagi memastikan kedaulatan negara ini terjamin.

Pada masa yang sama juga kekuatan yang berbentuk peralatan pertahanan tidak menjamin kemenangan sebuah pasukan pertahanan. Lihatlah tentera-tentera Amerika yang lari dari tugas apabila diarahkan untuk menceroboh dan berperang dengan penduduk Iraq yang bangun menentang mereka walaupun tentera-tentera Amerika dibekalkan dengan pelbagai peralatan peperangan yang canggih. Lihat juga pemuda-pemuda Palestin yang mempunyai keberanian luar biasa yang hanya menggunakan seketul batu bagi melawan tentera-tentera Israel yang bersenjatakan M-16. Dua fenomena ini adalah amat berbeza; Pertama: tentera Amerika yang mempunyai persenjataan canggih, takut untuk berperang sehingga lari dari tugas dan Kedua: pemuda-pemuda Palestin yang tidak takut untuk melawan tentera Israel walaupun mereka hanya bersenjatakan batu. Inilah fenomena yang perlu kita kaji agar satu kekuatan pertahanan yang baik dan mampu mempertahankan kedaulatan negara dapat direalisasikan. Hakikatnya, sumber manusia adalah aset penting untuk dibangunkan

¹¹ Prof. Dr. Abdul Halim b.Hj Mat Diah (2004), Kertas Kerja: "Peranan Intelektual Islam Dalam Penerapan Islam Hadhari", APIUM, Kuala Lumpur,h.6.

bagi menguatkan kekuatan pertahanan sesebuah negara dan barulah disusuli dengan mencipta, memiliki dan menggunakan peralatan pertahanan yang mampu menggerunkan pihak musuh. Manusia perlu dibangunkan jiwanya atau rohnya agar dapat memahami hakikat kehidupannya di dunia ini yang mempunyai matlamat dan tujuannya yang tertentu. Islam Hadhari dari sudut kekuatan pertahanan akan hanya tinggal slogan dan canangan semata jika sekiranya jiwa rakyat Malaysia tidak dibangunkan dengan kekuatan dalaman. Sumber kekuatan dalaman umat Islam adalah al-Quran dan al-Sunnah yang merupakan nadi penggerak kepada kemajuan dan ketamadunan yang menepati kehendak Maha Pencipta. Justeru itu, pengabaian kepada aspek jiwa atau roh ini akan mengakibatkan keruntuhan sesebuah tamadun yang akan dibina atau setelah dibina.¹² Cuba renungkan apa yang telah dilakukan oleh Presiden Jamal Abdul Nasir di dalam peperangan yang dikenali Peperangan Oktober dengan tentera Israel apabila beliau menekankan dan menerapkan keyakinan kepada anggota tenteranya untuk berperang dan berkeyakinan dengan senjata yang dimilikinya mampu menewaskan musuh walaupun senjata yang ada tidak setanding dengan yang dimiliki oleh tentera Israel.¹³ Apabila aspek ini ditüpukan ke dalam jiwa anggota tenteranya, mereka telah berperang dan berjuang berhabis-habisan bagi memastikan pihak Israel menemui padahnya.

PEMBENTUKAN ANGGOTA TENTERA

Islam Hadhari amat mementingkan kepada pembangunan individu untuk mengisi tamadun yang hendak dibentuk. Tanpa individu yang memahami matlamat kehidupannya di atas muka bumi ini, maka sudah tentu tamadun yang akan dibina hancur lebur begitu sahaja. Lihat sahaja tamadun Rom yang hancur akibat perundungan yang diwujudkan telah menyebabkan rakyat yang hidup di bawah tamadun ini hidup dalam keadaan yang kucar-kacir sehingga nafsu serakah menguasai sistem kehidupan mereka. Manakan tidak, dalam aspek sistem perundungan, mereka telah menghalalkan perkahwinan di antara bapa dan anak, menghalalkan pelacuran dan sosial

kehidupan lain yang mengakibatkan keruntuhan tamadun yang mereka bina.¹⁴ Begitu juga dengan keruntuhan Daulah-Daulah Islamiah yang pernah memerintah Barat dan Timur adalah disebabkan kerana individu yang memerintah dan rakyat di bawah pemerintahannya lemah disebabkan faktor-faktor berikut:

- „ Kelemahan dan hanyutnya para pemerintah ke dalam kemewahan.
- „ Korupsi bermaharajalela dan membuat dasar negara terdiri daripada mereka yang berkepentingan.
- „ Orang luar campur tangan dalam menentukan polisi pemerintahan negara.
- „ Terdapatnya anasir yang merosakkan akidah, kehidupan berpolitik dan pemikiran yang mengakibatkan para khalifah terheret ke dalam jurang kemusnahan.
- „ Musuh-musuh Islam yang sentiasa mencari ruang untuk melemahkan pemerintahan Islam seperti konspirasi Yahudi menjatuhkan kerajaan Othamaniyyah.¹⁵

Justeru itu, untuk membentuk anggota tentera yang akan mengisi dan meneruskan agenda Islam Hadhari, proses pembinaan yang berterusan melalui pentarbiahan dan latihan yang sistematik amat diperlukan. Pembinaan ini memerlukan kepada dua elemen penting iaitu golongan yang membentuk dan golongan yang dibentuk. Pengasingan di antara keduanya dari sudut latihan, keperluan kehidupan, pengisian iman dan aspek sosial yang lain akan mewujudkan ketidakseimbangan yang boleh mengakibatkan kepincangan yang jelas. Medan yang perlu diterokai amat luas khususnya yang melibatkan pembentukan seorang anggota tentera yang memahami tugas mereka sebagai seorang anggota tentera dan pada masa yang sama menjadi hamba Allah s.w.t yang sentiasa mengabdikan diri kepada-Nya. Lihat sahaja Komando Rasulullah

¹² Dr. Ismail Lutfi Japakiya (2004), Kertas Kerja: "Peranan Spiritual Dalam Pembinaan Islam Hadhari", APIUM, Kuala Lumpur, h.11.

¹³ Liwa Hasan al-Badri (1987), "Harb Ramadhan: al-Jaulah al-Gharbiyyah al-Israeiliyyah al-Rabi'ah Oktober 1973, Kaherah: Hai'ah al-Misriyyah al-A'mmah al-Kitab, h. 92-93.

¹⁴ Dr Said Ramadhan al-Buti(1993), "Fiqh Seerah", Muassasah ar-Risalah, Beirut, Cet. Kedua, h.85.

¹⁵ Dr. Abdul Halim U'wais (1982), "Analisa Runtuhnya Daulah-Daulah Islam", Terj: Drs Yudian Wahyudi, CV Pustaka Mantiq Yogyakarta Indonesia, h. 154.

¹⁶ Muhammad Ahmad Bashmil (1989), "Politik dan Ketenteraan-Perjanjian Hudaibiyyah", Penerbitan Hizbi, Kuala Lumpur, h. 62.

s.a.w; Abdullah bin Atiq', Mas'ud ibn Sanan, Abdullah ibni Anis, al-Harith ibni Rubai, Abu Qatadah dan Khuzai' ibni Aswad¹⁶ yang telah ditugaskan oleh baginda ke perkampungan Bani Yahudi Khaibar untuk membunuh Sallam ibn Abi al-Huqaiq yang merupakan penjenayah perang dan ketua provokasi terhadap Islam. Para komando ini ditugaskan untuk membunuh raja Khaibar di tengah-tengah kawasan istana, di bilik tidur, mempunyai pintu yang berlapis dan para pengawal yang gagah. Akhirnya Abdullah bin A'tiq (Ketua Komander) berjaya membunuh Sallam tanpa diketahui langkahnya dan kembali semula ke Madinah dengan tenang tanpa sedikit pun rasa takut. Inilah hasil pentarbiahan dan pendidikan yang dilaksanakan oleh Rasulullah s.a.w. yang melahirkan para sahabat yang beriman dan istiqamah dalam perjuangan tetapi pada masa yang sama mempunyai keistimewaan ilmu perang yang hebat. Tiga kesan yang berhasil daripada proses pendidikan yang telah dilaksanakan oleh Rasulullah s.a.w. ialah:

- Teguh dalam prinsip-prinsip perjuangan Islam dan sentiasa mengutamakan kehendak kepentingan umum daripada kepentingan diri sendiri.
- Khusuk dalam ibadah dan sentiasa mempertingkatkan pengabdiannya kepada Allah SWT.
- Mempunyai akhlak yang mulia dan menjadi teladan kepada masyarakat.

Seorang anggota tentera yang mempunyai ciri-ciri pahlawan seperti yang ditunjukkan oleh para sahabat Rasulullah SAW perlu melalui proses pendidikan berikut:

- Pendidikan Spritual.
- Pendidikan Pemikiran.
- Pendidikan Mental.
- Pendidikan Fizikal.
- Pendidikan Material.
- Pendidikan Sosial.¹⁷

Bagi menjayakan proses pendidikan untuk membentuk anggota tentera yang mempunyai tiga ciri tadi, semua institusi memainkan peranannya masing. Institusi yang dimaksudkan ialah Institusi Ketenteraan itu sendiri (organisasi ketenteraan), Institusi Keluarga, Institusi Masjid, Institusi Sekolah dan Institusi Masyarakat. Institusi ini perlu memainkan peranan penting untuk mewujudkan suasana yang kondusif bagi melahirkan masyarakat yang Rabbani termasuklah anggota tentera bagi mengisi Islam Hadhari yang kita usahakan kini.

SUMBER KEKUATAN PERTAHANAN

Ukuran sebuah negara yang kaya adalah berdasarkan kepada pendapatan yang diperolehnya dan pengagihan yang dilaksanakannya. Inilah ukuran asasi untuk menilai sesebuah negara tersebut kaya atau sebaliknya. Begitu juga dengan gambaran awal manusia mungkin menyatakan bahawa kekuatan, pertahanan sesebuah negara boleh diukur dengan persenjataan yang dimilikinya. Justeru itu, negara yang memiliki kekuatan persenjataan akan digeruni oleh negara lain dan mampu menjadi kuasa besar seperti Amerika Syarikat hari ini. Islam sama sekali tidak menolak hakikat ini, malah dari sudut sejarah Rasulullah s.a.w. membenarkan pembelian peralatan perang walaupun dari musuh seperti hadis di dalam kitab Musnad Imam Ahmad Ibn Hanbal dan kitab Sunan Abi Daud.¹⁸ Justeru itu, kelengkapan peralatan pertahanan atau peperangan juga diperlukan oleh sebuah negara untuk menyaingi keupayaan dan kekuatan persenjataan yang dimiliki oleh negara lain.

Mempertahankan kedaulatan negara adalah tanggungjawab semua rakyat di dalam sesebuah negara. Inilah kesedaran yang perlu diberikan kepada seluruh rakyat sesebuah negara. Rakyat bertanggungjawab untuk menangkis segala serangan yang ditujukan kepada negaranya demi kelangsungan kehidupan yang terjamin keselamatannya sama ada serangan tersebut berbentuk serangan pemikiran, serangan budaya dan juga serangan ketenteraan. Semua rakyat bertanggungjawab mempertahankan negara dan kedaulatannya daripada di ceroboh oleh pihak luar.

¹⁷ Khalid Ahmad Syautut (2003), "Tarbiyyah Askariyyah", Terj: Taufiq Khudhori, S.Ag dan Shadiq Khalidi, Era Intermedia, Solo Indonesia, h.70.

¹⁸ Dr Muhammad Khair Haikal (1996), "al-Jihad wa al-Qital fi as-Siyasah as-Syariyyah", Juz 3, Dar al-Bayariq, Beirut-Lubnan, h.1624.

Ketidakprihatinan rakyat terhadap kesedaran menjaga kedaulatan negara akan menyebabkan negara menanggung pelbagai kerosakan sama ada kerosakan harta benda mahupun kerosakan jiwa. Dari sudut aspek kekuatan pertahanan khususnya yang melibatkan ketenteraan, penubuhan Askar Wataniah merupakan faktor penyumbang kepada rakyat yang tidak memasuki perkhidmatan ketenteraan secara rasmi untuk bersama-sama mempertahankan kedaulatan negara. Banyak sumbangan telah diberikan oleh rakyat dalam membangunkan Askar Wataniah dan perkara ini perlu dipupuk dan digalakkan kepada rakyat untuk menyertainya kerana ia merupakan salah satu kekuatan pertahanan yang perlu dititik-beratkan.

Program Latihan Khidmat Negara (PLKN) merupakan di antara medan yang perlu digunakan sebaik yang mungkin untuk membina kekuatan pertahanan negara. Memang terdapat kekurangan yang perlu diperbaiki di dalam program ini khususnya yang melibatkan modul-modul latihan tetapi program ini merupakan aset penting yang boleh digunakan untuk melahirkan rakyat negara ini yang mempunyai semangat perjuangan kental, mempunyai jati diri hebat dan kecintaan terhadap negara yang begitu mendalam. Jika digabungkan 2 entiti ini iaitu Askar Wataniah dan penglibatan dalam PLKN dan setiap modul yang dirancang dapat dilaksanakan dengan baik, maka sudah tentu rakyat negara ini tidak akan terpinga-pinga atau panik apabila negara ini diserang oleh musuh. Sebaliknya, kuasa rakyat akan bergabung dengan kekuatan ketenteraan yang dimiliki oleh kerajaan yang akan menyebabkan musuh berfikir sebelum menceroboh negara ini.

Kerajaan Malaysia telah membelanjakan berbilion ringgit kepada pasukan keselamatan Malaysia khususnya Angkatan Tentera Malaysia bagi memastikan keselamatan negara ini terjamin. Ia ibarat pelaburan jangka panjang yang tidak boleh dinilai dan diukur dengan perolehan kewangan jutaan ringgit setiap tahun. Sebaliknya, pulangan daripada pelaburan ini ialah keselamatan dan keamanan yang dinikmati oleh rakyat Malaysia hasil daripada keringat dan pengorbanan yang dicurahkan oleh anggota Angkatan Tentera Malaysia sehingga rakyat dapat hidup dengan aman dan tenteram. Islam Hadhari yang diperkenalkan oleh kerajaan memberi kekuatan kepada Angkatan Tentera

Malaysia¹⁹ dengan penumpuan kepada keperluan persenjataan yang terkini dalam menambahbaikkan sistem pertahanan yang sedia ada selain dari anggota Angkatan Tentera Malaysia mestilah mahir menggunakan dan pakar dalam selok-belok peperangan. Islam amat menekankan aspek ini khususnya kemahiran menggunakan persenjataan atau peralatan peperangan sehingga Rasulullah s.a.w. memberi amaran kepada mereka yang belajar memanah (menggunakan senjata) tetapi melupakan kemahiran tersebut. Latihan yang berterusan selain daripada eksesais yang dilaksanakan, merupakan inti pati kepada kekuatan pertahanan anggota ATM. Justeru itu, pembinaan kekuatan pertahanan ini bermula terlebih dahulu dengan anggota tentera itu sendiri agar kemahiran yang diperoleh mampu menjadikan mereka sentiasa bersiap sedia untuk menghadapi sebarang kemungkinan yang berlaku.

Selain dari latihan menggunakan persenjataan dan selok-belok peperangan, setiap anggota tentera perlu diberikan bimbingan rohani yang secukupnya. Teori asas untuk memahami konsep bimbingan rohani ialah wujudnya perasaan tanggungjawab secara langsung dan sempurna terhadap penyediaan moral atau kekuatan rohani bagi anggota-anggota tentera di semua peringkat. Ianya adalah bertujuan untuk memenuhi matlamat-matlamat berikut:

- Supaya mereka dapat melaksanakan semua latihan peperangan dengan baik dan berjaya melepassi halangan yang ditetapkan.
- Menguatkan disiplin ketenteraan.
- Meninggikan kekuatan rohani (moral) angkatan tentera.²⁰

Tujuan matlamat ini ditetapkan adalah untuk memastikan kemenangan dalam peperangan dengan seberapa cepat yang mungkin serta mengurangkan kerugian seberapa yang boleh dari segi nyawa dan juga alat-alat kelengkapan peperangan. Malah setiap peperangan dan persenjataan baru yang dicipta semuanya menjurus untuk mengurangkan kehilangan nyawa dan mempercepatkan masa peperangan. Jika peperangan berpanjangan, maka sudah tentu ramai

¹⁹ Berita Tentera Darat Malaysia, Bil 132/Sep-Okt 2004, h.5.

²⁰ Abu Izam (1989), "Ketenteraan Dalam Islam", Penerbitan Hizbi, Kuala Lumpur, h.79.

nyawa terkorban, harta benda musnah dan kerugian yang tidak dapat digambarkan akan dialami.

Bimbingan yang berterusan dan seimbang sifatnya akan menghasilkan anggota tentera yang berkemampuan dari setiap sudut dan rela untuk mengorbankan dirinya demi kepentingan agama, bangsa dan negara. Sesungguhnya, bimbingan rohani kepada anggota tentera bukanlah untuk bermatlamatkan melahirkan anggota tentera yang ekstrem dan tersasar seperti kumpulan al-Maunah, tetapi ia bermatlamatkan menjaga kedaulatan negara Malaysia yang tercinta ini. Matlamat bimbingan rohani kepada anggota tentera adalah seperti berikut:

- „ Menanamkan semangat cintakan kedaulatan tanah air dan sentiasa komitmen terhadap prinsip-prinsip asas yang sedang dilaksanakan oleh negara sebagai contohnya prinsip Islam Hadhari sama ada pelaksanaannya di peringkat kebangsaan atau di peringkat antarabangsa. Pada masa yang sama bimbingan ini akan melahirkan anggota tentera yang berkeyakinan terhadap dasar dan prinsip yang dilaksanakan oleh kerajaan serta sanggup untuk mempertahankannya dengan mengorbankan jiwa dan harta benda dari setiap pencerobohan. Firman Allah di dalam surah an-Nisa' ayat 46: Maksudnya: "Wahai orang-orang yang beriman, taatlah kepada Allah dan taatlah kepada Rasul kamu".
- „ Bimbingan rohani yang berterusan akan mendidik anggota tentera supaya cintakan Allah, negara dan pemerintah serta mentaati suruhan mereka pada perkara-perkara yang bukan sampai menengkari perintah Allah s.w.t. Pada masa yang sama juga, ia mendidik anggota tentera supaya peka terhadap tanggungjawab peribadi untuk menjaga tanah air di samping berusaha untuk menjaga nama baik negara. Rasulullah s.a.w. pernah bersabda yang bermaksud: "Dengar dan taatlah, meskipun yang memerintah kamu itu hamba Habsyi"
- „ Memberi kefahaman kepada anggota tentera sebab-sebab dan kedudukan perperangan yang memerlukan pengorbanan nyawa mereka. Pada masa yang sama juga, bimbingan rohani yang baik akan menghasilkan anggota yang

memahami tujuan serta program-program yang dijalankan oleh organisasi Angkatan Tentera Malaysia dan bidang tugas mereka. Memahamkan mereka dengan matlamat dan hasrat musuh yang sentiasa mencari ruang dan kesempatan untuk menceroboh kedaulatan negara ini.²¹ Firman Allah di dalam surah al-Baqarah ayat 194: Maksudnya: "(Oleh itulah) barang siapa yang menyerang (menceroboh) kamu, maka seranglah mereka seimbang dengan serangan terhadap kamu".

- „ Mempertingkatkan kesedaran terhadap ad-Deen Islam dan berpegang teguh dengan akhlak yang mulia di samping menanamkan prinsip jihad yang suci, syiar kemenangan atau mati syahid. Firman Allah di dalam surah at-Taubah ayat 41: Maksudnya: "Berjuanglah dengan harta dan jiwa raga kamu pada jalan Allah".
- „ Menanamkan sifat ikhlas dan kesungguhan bekerja yang tidak berbelah bahagi serta peka dan bertanggungjawab terhadap semua anggota bagi membina keupayaan dan keyakinan untuk berperang dalam satu pasukan. Pembinaan semangat satu pasukan amat penting agar perpecahan yang mengundang pelbagai kesan negatif tidak akan timbul.
- „ Menyuburkan sifat bangga sebagai seorang anggota tentera yang berdisiplin dan komited terhadap kerja dan pada masa yang sama menjadi wakil kepada umat atau rakyat memelihara kedaulatan negara serta bersiap sedia untuk digerakkan bila-bila masa sahaja. Firman Allah dalam surah an-Nisa' ayat 95: Maksudnya: "Dan Allah melebihikan orang-orang yang berjuang (di antara kamu) ke atas orang yang duduk (tidak berjuang)".
- „ Menanamkan serta mempertingkatkan keyakinan seseorang terhadap dirinya dan keupayaan berperang yang dimiliki olehnya. Tujuannya adalah untuk melahirkan anggota tentera yang benar-benar berupaya untuk melakukan apa jua tugas berperang yang dipertanggungjawabkan ke atasnya pada setiap masa dan tidak kira di mana sahaja. Allah

²¹ Ibid, h. 82.

berfirman dalam surah al-Munafiqun ayat 8: Maksudnya: "Dan kemuliaan itu hanyalah untuk Allah dan untuk Rasul-Nya serta orang-orang Mukmin".

„ Menanamkan semangat tempur dan gempur yang tinggi di kalangan semua anggota dengan mempertingkatkan semangat keberanian dan latihan yang benar-benar berupaya untuk menanggung kesusahan di dalam perang. Firman Allah dalam surah al-Baqarah ayat 191: Maksudnya: "Dan bunuhlah mereka di mana sahaja kamu jumpai mereka. Dan usirlah mereka dari tempat mereka sebagaimana mereka mengusir kamu (dari Makkah)".

„ Mempertingkatkan sikap yang sensitif dalam menjaga segala rahsia dan keamanan yang berhubung dengan angkatan tentera baik dari segi maklumat, keanggotaan, dokumen, peralatan senjata dan sebagainya. Memelihara pasukan dari diketahui oleh perisik dan pencerobohan dari musuh merupakan salah satu tanggungjawab atau amanah yang boleh lahir dari kesedaran rohani melalui pendidikan yang berterusan. Rasulullah s.a.w. pernah bersabda: "Mintalah pertolongan (dari Allah) untuk menunaikan hajat-hajat kamu dengan merahsiakannya".

„ Melahirkan kesedaran untuk mengkaji bentuk perang saraf dari pihak musuh dan mengambil langkah-langkah yang terjamin untuk memelihara semua anggota daripadanya. Dalam hal ini, Rasulullah s.a.w. sentiasa menghantar perisik-perisiknya untuk mendapatkan maklumat tentang musuh berkaitan dengan perancangan yang mereka lakukan melalui seorang sahabat yang bernama Abdullah bin Jahsy.

Bimbingan rohani yang berterusan akan memberi kesan kepada jiwa anggota tentera tentang betapa pentingnya amanah yang dipikul oleh mereka yang akhirnya akan memberi kesedaran kepada mereka untuk melaksanakan tugas yang suci ini dengan penuh keikhlasan dan tidak menyimpang jauh dari syariat Islam.²²

CABARAN-CABARAN PELAKSANAAN KEKUATAN PERTAHANAN

Islam Hadhari yang memfokuskan kekuatan pertahanan adalah titik tolak kepada keselamatan dan kedaulatan negara ini daripada di ceroboh oleh musuh. Malah dengan menekankan bimbingan dan pendidikan yang berterusan, maka akan lahir generasi rakyat di negara ini yang sanggup berkorban apa sahaja bagi memastikan kedaulatan negara terjamin. Rasulullah s.a.w. selalu menekankan kepada para sahabatnya perihal pentingnya menjaga Madinah daripada di ceroboh oleh musuh. Begitu juga sepatutnya apa yang perlu dilakukan oleh anggota tentera pada masa ini yang perlu sentiasa bersiap siaga menjaga kedaulatan negara dari ancaman musuh dan pada masa yang sama menjaga maruah Angkatan Tentera Malaysia. Oleh yang demikian, setiap anggota Angkatan Tentera Malaysia perlu memahami profesion yang dipilihnya ini yang merupakan medan terdekat untuk mendapat ganjaran hebat daripada Allah s.w.t jika mereka melaksanakan tugas mereka dengan penuh keikhlasan dan tidak melanggar batasan syariat yang ditetapkan oleh Allah s.w.t. Apabila setiap anggota diberikan kefahaman tentang matlamat kenapa mereka menyertai Angkatan Tentera dengan menekankan bahawa matlamat mereka adalah suci, maka sudah tentu mereka mendapat satu kekuatan untuk mengorbankan jiwa raga mereka mempertahankan bumi ini walaupun seinci daripada jatuh ke tangan musuh.

Bagi mendapat satu kekuatan pertahanan yang mantap, maka sudah tentu pelbagai cabaran terpaksa ditempuhi sama ada dari pihak Kerajaan Malaysia sendiri mahupun kepada saf kepimpinan Angkatan Tentera Malaysia. Jika sekiranya kerajaan berperanan menyebarluaskan konsep Islam Hadhari kepada masyarakat, kepimpinan ATM pula perlu memahamkan kepada anggotanya konsep kekuatan pertahanan yang selari dengan konsep Islam Hadhari. Cabaran utama yang dihadapi oleh ATM adalah untuk memahamkan kepada anggotanya tentang konsep Islam Hadhari yang sebenarnya seperti yang dikehendaki oleh pihak pemerintah. Penglibatan secara menyeluruh dengan komitmen yang padu daripada setiap cabang perkhidmatan ATM iaitu Darat, Laut dan Udara di dalam menjayakan Islam Hadhari amatlah diperlukan. Ini

²² Khalid Ahmad Syantut (2003), Ibid, h.73.

adalah kerana, jika para anggota ATM tidak memahami kehendak Islam Hadhari maka sudah tentu apa sahaja seruan ke arah tersebut tidak akan mendapat respons atau tindak balas yang positif dan apa yang lebih malang lagi ada di kalangan mereka yang menentang arus ketamadunan yang cuba dilaksanakan oleh pihak pemerintah. Justeru itu, konsep Islam Hadhari secara umum dan kekuatan pertahanan secara khususnya, perlu disebarluaskan dan diberi penerangan yang berterusan kepada setiap anggota ATM. Inilah cabaran utama yang perlu ditangani agar kejahilan yang melanda dapat diberikan cahaya melalui proses pendidikan yang berterusan sama ada proses pendidikan secara formal atau tidak formal.

Mewujudkan keseimbangan dalam kehidupan anggota tentera agar Islam Hadhari dapat diaplikasikan dengan jayanya dan seterusnya mewujudkan satu sistem pertahanan yang mantap yang bukan sahaja dapat dilihat dari sudut peralatan pertahanan yang canggih malah dilihat juga dari sudut anggota tentera itu sendiri. Keseimbangan jasmani, emosi, rohani dan intelektual perlu dilaksanakan dengan menyeluruh dan pengabaian salah satu aspek ini akan mengakibatkan kekuatan yang diidamkan tidak akan wujud. Proses perseimbangan ini perlu dilakukan secara berterusan dan kesedaran untuk melaksanakannya perlu digembleng. Pelbagai aktiviti dan program boleh dilaksanakan dengan mengintegrasikan keseluruhan elemen yang ada di dalam ATM dengan tidak tertumpu kepada rutin pekerjaan seharian sahaja.

Aspek lain yang tidak boleh dipandang ringan ialah, kebijaksanaan musuh untuk menghancurkan dan mengalpakan masyarakat khususnya anggota tentera sehingga boleh menyebabkan maruah dan kedaulatan negara terancam. Sejarah telah membuktikan, apabila tentera-tentera negara China ketagihan candu, musuh dengan mudah mengalahkan mereka dan sejarah ini perlu menjadi iktibar khususnya kepada anggota tentera Malaysia. Musuh sentiasa mencari peluang untuk memusnahkan kekuatan yang ada dengan menggunakan pelbagai taktik dan strategi yang kadang-kadang tidak disedari. Sebagai contohnya Jabatan Pertahanan Amerika Syarikat telah mengambil khidmat pengintip asing termasuklah beberapa orang yang mempunyai reputasi tidak baik

bagi memenuhi kepentingan mereka di dalam negara tertentu di dunia ini.²³ Perkara sebegini perlulah dielakkan khususnya kepada Angkatan Tentera Malaysia kerana apabila rahsia-rahsia pertahanan diperoleh oleh pihak musuh, maka sudah tentu mudah bagi mereka untuk menjajah negara ini. Cabaran ini terpaksa dipikul oleh Angkatan Tentera Malaysia bagi memastikan anggotanya tidak terjerumus menjual maklumat bagi mendapatkan imbuhan yang boleh menggadaikan kedaulatan negara. Pada masa yang sama juga, anggota ATM perlu memahami strategi-strategi yang dilaksanakan oleh musuh-musuh Islam yang berusaha untuk mengelirukan mereka daripada berpegang kepada ajaran Islam itu sendiri.

PENUTUP

Membina Tamadun yang berteraskan kepada fitrah kejadian manusia merupakan satu tuntutan yang perlu dilangsaiakan oleh umat Islam. Dunia yang menghadapi zaman globalisasi dan teknologi maklumat canggih pada saat ini, perlu diikuti oleh umat Islam agar mereka seajar dengan perkembangan ilmu pengetahuan dan perubahan yang berlaku di sekelilingnya. Islam Hadhari yang diperkenalkan oleh pemerintah adalah bermatlamatkan karah ini dan dengan tidak sama sekali membelakangi atau meninggalkan dasar dan nilai ad-Deen Islam. Jika sekiranya tamadun Barat mengagungkan kebendaan pada masa yang sama ketandusan nilai ketuhanan dan moral dalam pembangunan tamadun mereka, Islam menolak persepsi dan aplikasi tamadun sebegini. Ini adalah kerana tamadun Barat yang dibina oleh mereka berdiri sebagai satu tamadun permusuhan, pembunuhan, konflik, krisis dan kekosongan jiwa dan hati nurani yang mengakibatkan kehancuran kepada penganut tamadun ini. Kesan daripada tindakan buruk ini akan menghasilkan natijah yang buruk sebagaimana yang dinyatakan oleh Allah s.w.t di dalam firmanya:²⁴ Maksudnya: "...dan tanah yang baik, tanamannya tumbuh (subur) dengan izin Allah, dan tanah yang tidak baik, tanamannya tidak akan tumbuh kecuali dengan keadaan bantut.

²³ Utusan Malaysia, "AS tubuh satu lagi cawangan intipan baru", 21 Januari 2005, h. 1.

²⁴ Al-Quran, Surah al-Araf (7): 58.

Demikianlah Kami menerangkan tanda-tanda (kekuasaan) Kami dengan berbagai cara bagi orang-orang yang bersyukur”.

Ad-Deen Islam sama sekali tidak menolak pembangunan dan kemajuan yang membawa kesejahteraan kepada umat malah itulah agenda utama Tamadun Islam yang dibina oleh Rasulullah s.a.w. Semua kemajuan yang dicapai pada masa tersebut dan pada zaman era kegemilangan tamadun Islam akan mengambil kira kesejahteraan kehidupan umat. Oleh yang demikian, Islam Hadhari

khususnya yang merangkumi kekuatan pertahanan memerlukan kepada pentafsiran dan pelaksanaan yang dinamik dan berwibawa sejajar dengan era baru yang penuh dengan variasi fitrah manusia. Kegagalan untuk menerapkan konsep Islam Hadhari dalam aspek kekuatan pertahanan akan melahirkan kecacatan yang ketara terhadap Islam itu sendiri. Justeru itu, semua pihak perlu prihatin dalam menjayakan gagasan Islam Hadhari yang mestilah bermatlamatkan ketamadunan yang menepati fitrah manusia dengan berteraskan kepada al-Quran dan al-Sunnah.

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Utusan Malaysia 21 Jan 2005.



Kapt Nadzri bin Musnman mula berkhidmat dalam Kor Agama Angkatan Tentera Malaysia (KAGAT) pada 10 Okt 1997. Beliau berkelulusan Diploma Pengajian Islam (Syariah) KUSZA, Ijazah Sarjana Muda Pengajian Islam dan Bahasa Arab Universiti al-Azhar, Diploma Pentadbiran Kehakiman dan Guaman Syarie UKM dan sekarang ini sedang menyiapkan tesis sarjana dalam bidang Pengajian Syariah Fiqh dan Usul di Universiti Malaya dan pada masa yang sama juga mempunyai tauliah Peguam Syarie. Sekarang ini beliau menjawat jawatan sebagai Pegawai Staf 2 Penerbitan Jabatan Arah KAGAT.

KRITERIA PENTING MENGHASILKAN TENAGA MANUSIA YANG BERKUALITI DALAM INSTITUSI TENTERA

— By : Kapt Rohana Bte Mat Arshad —

PENDAHULUAN

Sumber manusia dalam sesebuah organisasi berkait langsung dengan individu yang menjadi nadi dalam pelaksanaan tanggungjawab dan tugas. Dalam kata lain ia merupakan tunggak utama perjalanan organisasi, yang secara langsung memainkan peranan untuk merancang, mengkoordinasi, memantau dan menggunakan peralatan serta kemudahan demi untuk kecemerlangan dan kejayaan organisasi.

Demikian juga dalam institusi ketenteraan. Kepentingan dalam aspek tersebut memang tidak dapat dinafikan dan ketiga-tiga perkhidmatan dalam Angkatan Tentera Malaysia (ATM) terus memandang serius terhadap aspek ini. Ini terbukti dengan kewujudan bahagian yang bertanggungjawab dalam urusan mentadbir, mengkoordinasi, memantau, melaksana serta menyelenggarakan urusan semasa sumber manusia. Bagi Tentera Darat Malaysia (TDM), bahagian tersebut dikenali sebagai Cawangan Sumber Tenaga Manusia (CSM), Tentera Laut Diraja Malaysia (TLDM) merujuk kepada Bahagian Sumber Manusia Markas Tentera Laut, manakala bagi Tentera Udara Diraja Malaysia (TUDM) pula diuruskan oleh Bahagian Sumber Tenaga Markas Tentera Udara Diraja. Penekanan kepada aspek ini perlu konsisten, sistematik dan sealiran dengan pembangunan serta pemodenan institusi. Ini bertujuan untuk memastikan bahawa ATM, amnya dan TDM khasnya sentiasa unggul, disegani, di sanjungi dan seterusnya mampu diteladani oleh institusi luar.

Memang tidak dapat dinafikan ATM kini menuju ke arah pemodenan dan pembangunan. Pelbagai Perjanjian Persefahaman (MoU) ketenteraan untuk pembelian senjata, kelengkapan dan peralatan

terkini dilakukan khususnya dengan Rusia. Namun seberapa canggih dan moden teknologi serta pembangunan sesebuah institusi ini, faktor sumber manusia adalah ‘titik utama’ kejayaan. Ia sejajar dengan fitrah kejadian manusia dan keupayaan mereka untuk manipulasi dan memahami keadaan, merancang, memproses, melaksana, mengurus serta mentadbir sesuatu dan membuat penilaian terhadap urusan tersebut. Tanpa manusia sebagai pengendali, pasti peralatan dan persenjataan tidak dapat dimanfaatkan untuk mencapai sesuatu misi, menuju ke arah kemajuan institusi, perkembangan organisasi mahupun demi mempertahankan agama, bangsa dan negara. Menyedari tentang kepentingan aspek tersebut, pemimpin utama negara serta pemimpin tertinggi tentera, sentiasa memberi pendekatan kepada aspek sumber manusia. Tidak kira mereka di kalangan pemimpin generasi terdahulu atau kini, mereka sentiasa meletakkan faktor sumber manusia sebagai teras dan tulang belakang organisasi. Misalnya ungkapan yang diluahkan oleh pemimpin nombor satu negara (Perdana Menteri Malaysia ke lima) Dato' Seri Abdullah bin Ahmad Badawi, ‘Bekerja bersama saya, bukan bekerja untuk saya’. Secara tersiratnya ia menyentuh tentang aspek sumber manusia. Sebagai pemimpin, beliau berkehendakkan supaya semua individu terutamanya yang berkhidmat dalam perkhidmatan awam menjalankan tanggungjawab serta bekerjasama sepenuhnya untuk melaksanakan amanah dengan rela hati, tanpa ada sebarang unsur paksaan. Idea, perancangan serta usaha membangunkan aspek sumber manusia oleh beliau bukanlah suatu perkara baru, tetapi ia di jelaskan lagi dan terus di dukung, dipraktik, digembbleng, dilipatgandakan dan diberi sinambungnya demi untuk membina sebuah organisasi perkhidmatan awam yang cekap, bersih dan amanah.

Manakala dalam institusi tentera, peranan sumber manusia lebih mencabar, berisiko dan berteraskan disiplin yang tinggi. Di samping berperanan untuk mentadbir dan mengurus, sumber manusia jugalah yang menjadi benteng pertahanan negara serta membantu dalam misi-misi pengaman pertubuhan Bangsa-Bangsa Bersatu(PBB). Tidak kira sama ada mereka terdiri dari kalangan pemimpin dan yang dipimpin, tanggungjawab serta amanah yang dipikul amat besar dan memerlukan pengorbanan jiwa dan raga. Mereka yang benar-benar menghayati serta menyedari hakikat ini pasti akan berusaha untuk menjadi anggota tentera yang benar-benar dikagumi, berkualiti dan sentiasa menyumbang ke arah kecemerlangan institusi.

PANDANGAN PEMIMPIN TEHADAP FAKTOR SUMBER MANUSIA

Faktor sumber manusia amat popular dan sering di beri penekanan oleh pemimpin di pelbagai peringkat baik pemimpin tinggi negara, pemimpin utama ATM mahupun pemimpin-pemimpin TDM. Aspek ini terus diberi perhatian dan akan sentiasa dititikberatkan dalam sesebuah organisasi.

Perdana Menteri kelima Malaysia Dato seri Abdullah Ahmad Badawi telah menegaskan pendapatnya tentang faktor sumber Manusia sempena Majlis Berbuka puasa di Masjid Al-Walid, Jalan Padang Tembak pada tahun 2004. Menurut beliau, faktor Manusia merupakan elemen penting jika mahu mencapai kejayaan dalam sesuatu bidang, "Kita mungkin ada senjata terbaik tetapi jika ia tidak dapat digunakan secara maksimum, tidak ada gunanya. Ketahanan anggota tentera kita sangat penting dan bukannya peralatan. Manusia yang akan mengendalikan senjata, manusia akan pandu pesawat penerbangan dan manusia jugalah yang akan mengemudikan kapal. Kita tidak mahu jadi negara yang ada kemajuan kelas pertama tetapi sikap kelas ketiga. Ia bukan hanya untuk perkhidmatan awam tetapi juga ATM"¹. Pendirian beliau tentang sumber manusia amat jelas dan merumuskan bahawa ia merupakan pemangkin kepada pembangunan dan kejayaan institusi. Secara langsung, organisasi tentera akan sentiasa disanjung, dihormati dan menjadi kebanggaan masyarakat kerana kehandalan, kepahlawanan dan integriti. Semua unsur tersebut bertitik tolak dari faktor sumber manusia yang berkualiti.

Manakala pemimpin-pemimpin tertinggi dalam ATM, amnya dan TDM khasnya sama sekali tidak pernah mengabaikan aspek ini dalam agenda kepimpinan mereka. Rumusan serta saluran yang digunakan untuk menyatakan tentang aspek ini adalah melalui Perintah Ulung, ucapan semasa sambutan Hari Ulang Tahun (HUT) Perkhidmatan, mesyuarat bersama pemimpin-pemimpin tertinggi formasi, perjumpaan bersama pelbagai peringkat pegawai dan wawancara semasa.

Bekas Panglima Angkatan Tentera Malaysia, Jeneral (B) Tan Sri Dato' Seri Mohd Zahidi bin Hj Zainuddin telah menyentuh tentang kepentingan aspek manusia ini dalam perutusannya sempena Hari Ulang Tahun ATM ke-67 pada 16 Sept 2000. Menurut beliau "Cabaran ketiga yang akan memberi impak mendalam kepada ATM di alaf baru ini adalah sejauh mana keupayaan setiap warganya mengekalkan jati diri sebagai anggota tentera dengan usaha mempertingkatkan taraf profesionalisme, memperbaiki mutu disiplin yang tinggi, bermoral, inovatif dan dinamik. Ciri-ciri ini perlu dimiliki dan tersemai dalam sanubari setiap warga tentera khususnya di semua peringkat kepimpinan daripada Lans Koperal ke Jeneral. Apabila semua peringkat dalam perkhidmatan mempunyai nilai-nilai ini, maka saya percaya ATM akan menjadi sebuah organisasi yang mantap dan disegani". Beliau menjelaskan sebagai unsur penting dalam perkhidmatan, warga tentera dari pelbagai peringkat baik pemimpin atau yang dipimpin, pegawai atau anggota bawahan mahupun pemimpin peringkat atasan, pertengahan atau bawahan, perlu mengekalkan jati diri serta membangunkannya dari semasa ke semasa. Ia bertujuan untuk menyumbang ke arah pembangunan dan kecemerlangan serta memartabatkan imej institusi di kalangan masyarakat awam.

Bekas Panglima Tentera Darat, Jeneral (B) Dato' Ismail Hassan dalam perintah ulungnya telah memperturunkan pembangunan sumber manusia sebagai matlamat pertama sepanjang kepimpinannya. Beliau menghendaki TDM melaksanakan penilaian terhadap sistem pembangunan sumber manusia (human resource management) bagi memantapkan pengurusannya (human resource development) agar dapat

¹ Utusan Malaysia, Sabtu 15 November 2003, muka surat 2.

menjamin kesaksamaan dan keadilan demi pemeliharaan moral yang tinggi². Penumpuan kepada strategi ini merupakan usaha terancang untuk memodenkan institusi yang berwibawa ini. Ini kerana beliau sentiasa menyedari bahawa tenaga manusia merupakan kekuatan utama organisasi dan menjadi pemangkin ke arah pembangunan perkhidmatan ketenteraan khususnya TDM. Seterusnya usaha beliau dikembangkan, diolah dan diinterpretasikan terus dalam misi kepimpinan generasi terkini.

Jeneral (B) Tan Sri Md Hashim bin Hussein, Panglima Tentera Darat ke-18 misalnya telah menegaskan tentang aspek sumber manusia melalui pelbagai pendekatan, termasuklah dalam risalah kecil ‘Coup D’oeil’, ‘Malaysian Army Gallant and Loyal Always in the Forefront’, muka surat 2. Beliau telah meletakkan keutamaan kepada sumber manusia dengan penyataan “the main force for any organizational change is man himself. However, the human element (man) must be conditioned for the change and the new role that he will undertake. The k-Army concept will create a knowledgeable, competent and highly motivated organization that will begin with the human imperative, Effective change management entails gradual transformation lest it generates friction which will be counter-productive. The Army realizes this and has instituted a number of programmes to drive the process, with particular emphasis towards developing quality human resource. Quality human resource will provide the impetus to develop in tandem, machine and methods required to materialize the concept. It should however be borne in mind that the Army will need to further develop and implement programmes as change should be continuous”. Menurutnya kekuatan penting ke arah perubahan sesebuah organisasi adalah manusia. Elemen sumber manusia mesti bersedia untuk melakukan perubahan dan bertanggungjawab untuk memainkan peranan terhadap perubahan tersebut. K-Army yang dicetuskan oleh beliau berupaya mewujudkan sebuah organisasi yang baik, berwibawa dan bermotivasi berdasarkan kekuatan sumber manusia. Menyedari tentang unsur tersebut, usaha-usaha dan program berkesan perlu diambil bagi menghasilkan sumber manusia yang berkualiti. Ia perlu dibangunkan dari semasa ke semasa dan dilakukan secara berterusan.

² Perintah Ulung Panglima Tentera Darat, Sorotan Darat – T3029 Jun 1997 Jilid 1 Bil.31

Atas kesedaran untuk meneruskan budaya kecemerlangan TDM dari kepimpinan terdahulu, Jeneral (B) Dato’ Wira Mohd Shahrom bin Dato’ Haji Nordin yang telah memegang tumpuk pemerintahan tertinggi TDM, turut meletakkan sumber manusia sebagai aspek utama dalam menjayakan perjuangannya. Aspek ini terus menjadi fokus dengan menjurus kepada usaha meningkatkan tahap profesionalisme, ilmu perang, mutu latihan, disiplin, etos kepahlawanan dan pembangunan karakter. Tidak ada gunanya mempunyai peralatan yang moden jika anggota sendiri tidak mempunyai ilmu dan nilai-nilai yang diperlukan bagi mengoptimumkan peralatan tersebut. Latihan-latihan yang mengaplikasikan IT kepada anggota peringkat bawahan akan memastikan mereka terlatih dan bersedia mengendalikan peralatan-peralatan berteknologi tinggi yang sedia ada dan yang bakal dibekalkan kepada TDM. Di samping itu usaha akan diteruskan bagi menyiapkan prasarana untuk memastikan keselesaan serta mempertingkatkan taraf hidup anggota-anggota. Usaha ini turut meliputi anggota-anggota yang melaksanakan operasi di Sabah dan Sarawak. Projek perumahan pegawai dan anggota bawahan yang dijangkakan dapat disiapkan menjelang tahun 2005 merupakan usaha-usaha untuk meningkatkan taraf hidup warga Tentera Darat dan seterusnya memberi sandaran yang amat kukuh untuk menyediakan mereka sebagai anggota tentera yang cukup terlatih³.

Meneruskan sinambung usaha ke arah pembangunan sumber Manusia, Panglima Tentera Darat ke-20, Jeneral (B) Dato’ Pahlawan Mohd Azumi bin Mohamed turut merangkul faktor sumber manusia sebagai aspek penting dalam merealisasikan perjuangannya. Hasrat tersebut tersurat dalam perintah ulung beliau dan secara langsung ia telah menjadi antara matlamat utama pemerintahannya. Sasaran penting dalam misi perjuangan beliau adalah:

- „ Penghayatan Tema ‘Tentera Darat Teras Utama Kedaulatan Negara’.
- „ Disiplin.
- „ Kepimpinan.
- „ Profesionalisme.

³ Jabatan arah Polis Tentera, ‘Jen Dato’ Seri Mohd Shahrom bin Dato’ Haji Nordin, Tentera Darat Teras Utama Kedaulatan Negara’, m/s 14.

- „ Semangat Setia Kawan.
- „ Kebajikan.

Umumnya, inti pati pemerintahan beliau adalah memberi tumpuan kepada kepentingan pembangunan sumber manusia. Kesemua aspek yang dijelaskan adalah berkait langsung dengan tenaga manusia itu sendiri. Misalnya disiplin, siapa yang mendukung serta perlu mematuhi peraturan yang digariskan? Sudah pasti manusia. Begitu juga dengan kepimpinan, tidak kira seberapa canggih teknologi dan pembangunan organisasi, yang menerajuinya tetap manusia. Walaupun kekuatan ketumbukan tentera tidak lagi dilihat dari segi jumlah anggota, sebaliknya lebih kepada kejayaan mengaplikasikan teknologi Revolusi Hal Ehwal Tentera - Revolution in Military Affairs (RMA), PTD tidak pernah sama sekali mengabaikan aspek ini. Berikutan itu, pemimpin-pemimpin dari peringkat lain sama ada di peringkat formasi, pasukan, kompeni, detasmen dan sebagainya perlu sentiasa praktikal serta rasional untuk bersama-sama menjayakan hasrat beliau.

KUALITI SUMBER MANUSIA DAN PEMBANGUNAN INSTITUSI

Sejajar dengan garis panduan Pengurusan Kualiti Menyeluruh (TQM), kualiti merujuk kepada barang-barang dan perkhidmatan yang dihasilkan yang berupaya memberi kepuasan kepada pelanggan. Manakala menurut Kamus Dewan (Edisi Baru) 1999, muka surat 662, "kualiti adalah mutu iaitu yang biasanya dimaksudkan mutu barang atau perkhidmatan yang baik. Berkualiti pula merujuk kepada sesuatu (barang atau perkhidmatan yang bermutu baik)".

Secara dasarnya, kualiti yang dibina ini perlu bersesuaian dengan misi, visi, matlamat, objektif serta persekitaran organisasi. Sumber manusia yang berkualiti merujuk kepada sekumpulan individu yang diberi amanah serta mampu melaksanakan tanggungjawab yang diberikan dengan baik. Hasilnya perkhidmatan yang diberikan dapat memberi kepuasan yang optimum kepada pelanggan organisasi.

Dalam konteks institusi tentera, ia merujuk kepada golongan individu yang bergelar 'soldiers'

atau mereka yang telah dilantik secara sah dalam perkhidmatan ini. Mereka terdiri daripada pegawai dan anggota yang menjawat jawatan di pelbagai peringkat pengurusan sama ada atasan, pertengahan dan bawahan. Mereka ini seharusnya sinonim dengan sikap taat setia yang tidak berbelah bagi, disiplin yang tinggi, semangat setia kawan yang jitu, tidak mementingkan diri, berwibawa serta dedikasi dan sebagainya. Namun, dewasa ini situasi ini telah berubah dan sumber manusia yang sepatutnya mendukung sifat-sifat baik serta terpuji ini menjadi bagi 'hilang arah tuju' dan mencalarkan imej perkhidmatan. Mungkin segelintir yang melakukan tetapi ibarat kata pepatah 'kerana nila setitik rosak susu sebelanga'. Disebabkan beberapa orang individu tentera yang terlibat dengan isu rompakan, mencuri dan merogol, satu perkhidmatan mendapat 'bahana' dan nama buruk. Disebabkan sekelompok individu tentera yang melakukan pergaduhan di hadapan khalayak, hampir seluruh perkhidmatan dipandang sinis. Tidak kurang juga yang sewenang-wenangnya meninggalkan perkhidmatan yang mulai ini tanpa cuti dan kebenaran pemimpin atasannya (THTC dan tinggal tugas) serta melakukan perkara-perkara yang bertentangan dengan tuntutan perkhidmatan. Walhal sepatutnya mereka tidak boleh mengingkarinya. Berdasarkan statistik jenayah yang dikeluarkan oleh Cawangan Probos Marsyal ATM, sebanyak 4314 kes yang melibatkan berbagai kesalahan telah dikesan dari tahun 1994 hingga 2001⁴.

Di mana silapnya? Apakah perlu institusi ini menuding jari kepada masyarakat yang sentiasa berpandangan prejudis? Apakah perlu kita menyalahkan kerajaan yang hanya menyediakan keperluan yang pada pandangan sesetengah individu kurang memuaskan dari perkhidmatan lain? Tidak perlu menyalahkan pihak lain. Yang terbaik renung kembali kepada generasi tentera sebelum ini. Bagaimana dengan kemudahan dan peralatan yang terhad mereka dapat menjalankan tanggungjawab mereka dengan baik? Macam mana mereka dapat mengekalkan taat setia yang tinggi kepada perkhidmatan dalam situasi yang amat tertekan dan penuh mencabar? Malahan masyarakat pada ketika itu memandang institusi ini

⁴ Mej Rahman bin Wok 'Pencegahan Jenayah Dalam Angkatan Tentera Malaysia: Satu Cabaran' Sorotan Darat T 3029 Dis 2002 Bil 40.

dengan penuh kebanggaan, rasa dihormati dan menyanjung tinggi sikap keperwiraan anggotanya.

CIRI-CIRI SUMBER MANUSIA YANG BERKUALITI

Dalam usaha menuju kepada kecemerlangan organisasi, pihak pemimpin dan individu tentera itu seharusnya mengubah persepsi mereka kepada perkhidmatan. Sentiasa berpandangan baik terhadap tugas dan menganggap amanah dan misi yang diberikan perlu dilaksanakan dengan ikhlas dan jujur. Bagi menyumbang ke arah usaha ini faktor sumber manusia perlu diberikan penekanan utama. Usaha-usaha ke arah pembangunan faktor ini perlu diteruskan dan dalam mencapai hasrat ini, langkah terawal yang amat penting adalah dengan mengenal pasti kriteria-kriteria atau ciri-ciri sumber manusia yang berkualiti.

Menurut Field Marsyal Muntajmiri: 'Kekuatan sebenar angkatan tentera itu bergantung kepada kekuatan rohani, semangat wira, semangat berpasukan dan disiplin ketenteraan'. Penyataan ini merangkumi bahawa dalam angkatan bersenjata faktor utama dan terpenting adalah sumber manusia, dan kewujudan sumber asas ini perlu diiringi ciri-ciri yang bersesuaian bagi menjamin kecemerlangan dan keunggulan organisasi tentera. Berdasarkan penyataan tersebut dan sejajar dengan arus pemodenan yang berlaku ke atas institusi tentera ciri-ciri yang dikenal pasti mewujudkan sumber manusia yang berkualiti adalah seperti berikut:

Mempunyai Tahap Kekuatan Rohani Yang Teguh. Kekuatan rohani merupakan faktor asas dan terpenting dalam melaksanakan sesuatu misi perjuangan. Ia berkait langsung dengan persiapan iman, semangat dan keazaman untuk melaksanakan tugas tanpa wujudnya sebarang unsur paksaan. Pada zaman awal perkembangan Islam, kejayaan yang dicapai dalam beberapa pertempuran utama adalah bersumber kepada kekuatan dan keteguhan iman pejuangnya. Allah s.w.t memberi ingatan kepada mujahid Islam:

'Wahai Nabi beri perangsang orang yang beriman itu untuk berperang 20 orang yang

sabar, nescaya mereka akan dapat menewaskan 200 orang (daripada pihak musuh) dan jika ada di antara kamu 100 orang sabar nescaya mereka dapat menewaskan seribu orang daripada golongan kafir'. Pada ketika itu, apabila sampai arahan Allah s.w.t supaya pergi berjuang menentang musuh orang-orang mukmin berebut-rebut untuk berjuang di medan perang bagi mendapatkan mati syahid⁵.

Dengan wujudnya kesediaan, kesedaran dan kerelaan yang lahir dari kekuatan rohani yang teguh, pejuang atau individu yang berkenaan akan sanggup berkorban jiwa dan raga serta tanpa ragu-ragu lagi mereka 'takkan berundur sebelum kalah'. Individu yang memiliki kekuatan rohani seumpama ini 'akan berjuang sehingga ke titisan darah yang terakhir', tidak mengutamakan kepentingan peribadi dan sentiasa berpegang kepada 'sumpah satria' yang telah dilafazkan demi mempertahankan agama, bangsa dan negara yang tercinta. Malahan mereka akan sentiasa bermotivasi untuk bekerja dan tidak akan sewenang-wenangnya melakukan tindakan yang menyalahi peraturan dan melanggar disiplin serta mencemarkan imej perkhidmatan yang mulai ini.

Kekuatan persenjataan serta pemodenan teknologi ketenteraan yang sedia ada perlu disusuli bersama oleh kekuatan serta keteguhan rohani warganya. Dalam situasi dan kepastian yang sebegini kebarangkalian untuk menguasai medan pertempuran dan berjaya dalam mencapai misi yang digariskan adalah tinggi. Misalnya, jika direnung kembali kegagalan misi Amerika Syarikat di Vietnam, kenapa mereka mengalami kegagalan sedangkan peralatan dan kelengkapan persenjataan cukup sempurna serta moden? Iran di bawah pimpinan Ayatollah Khomeini berani dan cukup lantang mencabar kuasa besar dunia, mengapa beliau berpendirian begini? Ia berpunca dari kekuatan serta sejauh mana iman bala tentera mereka.

⁵ 'Himpunan Rencana-Islam Tahun 1407/1986-BIL 4', Jabatan arah Kor Agama Angkatan Tentera (KAGAT) Kementerian Pertahanan Malaysia, m/s 15.

Mempunyai Tahap Fizikal Yang Mantap dan Tahan Lasak. Dalam situasi tentera, setiap warganya perlu memiliki tahap fizikal yang mantap, tahan lasak dan cukup bersedia untuk menghadapi sebarang risiko serta kemungkinan. Warga tentera secara keseluruhannya dari peringkat awal lagi telah didedahkan tentang kepentingan aspek kekuatan fizikal. Semasa sesi pemilihan pegawai mahupun anggota, mereka telah menjalani sesi ujian ketahanan fizikal seperti berlari merempuh halangan dan sebagainya. Seterusnya mereka didedahkan pula kepada beberapa aspek latihan asas ketenteraan seperti latihan hutan, berkawad, jalan laju, bersukan serta beberapa bentuk latihan lain yang sentiasa memerlukan kekuatan fizikal. Di samping itu semasa sesi latihan bagi memastikan tahap ketahanan fizikal berada dalam keadaan yang cukup memuaskan, pegawai atau anggota yang berkenaan dikehendaki melaksanakan latihan fizikal harian (PT).

Walau bagaimanapun, situasi tersebut tidak berlanjutan atau diteruskan apabila mereka bekerja di formasi dan pasukan. Sesetengah pentadbir atau pemerintah terpaksa mengabaikan aspek latihan fizikal harian kerana kesibukan tugas semasa. Kesannya, ada sesetengah anggota menghadapi masalah lebih BMI, mengalami risiko pelbagai penyakit dan sebagainya. Dalam jangka masa panjang, keadaan ini akan memberi impak yang tidak baik kepada perkembangan organisasi dan mempengaruhi pandangan masyarakat terhadap imej warga tentera. Berikutan itu, bagi menjamin tahap kekuatan fizikal yang tinggi dan mantap di kalangan anggota, pemimpin di pelbagai peringkat baik di peringkat atasan, pertengahan mahupun bawahan perlu memastikan aspek latihan ketahanan fizikal dilakukan serta dilaksanakan tidak kira di mana mereka berada. Dalam masa yang sama, setiap warga tentera yang berkenaan perlu sentiasa peka serta akur dengan kehendak perkhidmatan dan bersedia untuk melakukan latihan fizikal secara individu. Ini kerana kecemerlangan organisasi tentera amat bergantung kepada individu yang mendukungnya. Tanpa kekuatan fizikal yang baik di kalangan warga pasti ATM tidak mampu terlibat secara langsung dalam

misi-misi pengaman Pertubuhan Bangsa-Bangsa Bersatu (PBB), tidak berupaya untuk mengawal sempadan serta perairan negara dan tidak tega sama sekali untuk mempertahankan watan tercinta.

Mempunyai Tahap Disiplin Yang Tinggi. *'Self-discipline involve taking control of one's mind, emotions and habits. Its cannot be judged from the uniform you wear. Successful people are willing to make sacrifices and postpone immediate gratification for seeing future dividends. The focus their attention on attaining their goods and are not side-tracked by distraction. In the military environment, self-discipline is very important, as we are required to perform high-risk jobs with less supervision especially during war. Self-discipline involves integrity, is vital and as for leaders integrity is vital. It is essentially the feeling of self-competence and self-worth. It empowered individuals to attain desired goals and to optimise their potentials'*⁶. Disiplin diri merupakan tunggak utama untuk mencapai serta menjayakan sesuatu matlamat. Melalui disiplin yang jitu dan tinggi dalam diri, seseorang individu dapat mengawal minda, emosi dan perlakuannya. Seseorang yang ingin berjaya terpaksa melakukan pengorbanan dan sentiasa berusaha untuk mematuhi atau mendisiplinkan dirinya dalam urusan semasa. Dalam institusi ketenteraan, memandangkan risiko dan kemungkinan yang tidak menentu, keperluan untuk menjaga disiplin diri adalah amat penting terutama semasa menghadapi perang. Melalui disiplin yang tinggi anggota akan sentiasa optimis dalam melaksanakan tanggungjawab, bermotivasi untuk menunaikan amanah dan akhirnya berupaya membantu menjayakan misi organisasi.

Umumnya, disiplin adalah cermin diri dan imej sebenar warga tentera. Ia secara langsung membezakan antara tentera dan anggota awam. Disiplin tidak hanya dilihat dari segi pemakaian seragam dan kekemasan tetapi ia meliputi seluruh aspek pengurusan dan pentadbiran diri termasuklah menepati masa, perlakuan, mematuhi undang-undang dan peraturan tentera dan semasa, akur kepada perintah atasan dan

⁶ Mej Hassan bin Ali, 'Ten Mindsets Key To Success', Sorotan Darat – T 3029 Jun 2001 Jilid 1 Bil 37 m/s 87.

sebagainya. Dengan tahap disiplin yang tinggi sudah pasti seseorang itu tidak akan melakukan perkara-perkara yang melanggar tatatertib perkhidmatan serta mengingkari arahan semasa dan pegawai atasan. Mereka akan terdorong untuk melakukan perkara-perkara positif dan secara langsung dapat mengharumkan kembali imej tentera yang hampir tercalar dengan sikap sesetengah pihak yang tidak bertanggungjawab. Sikap taat setia yang jitu kepada perkhidmatan serta setia kawan yang kukuh secara nyata akan terbina dengan sendirinya apabila setiap individu bersedia mengamalkan serta mengekalkan tahap disiplin yang tinggi. Berikutnya itu, pengekalan imej yang bersih serta baik adalah penting dan titik tolak usaha ini adalah bermula dengan pemupukan disiplin yang tinggi di kalangan warga tentera. Dalam mencapai hasrat ini semua pihak khususnya pemimpin atasan harus memainkan peranan bersama dan melaksanakan pelbagai pendekatan yang strategik serta bijak.

» Mempunyai Ilmu Pengetahuan Yang Baik dan Sempurna. Kepentingan ilmu pengetahuan dalam kehidupan seharian telah disentuh dari peringkat awal perkembangan Islam iaitu dalam Al-Quran surah ‘Iqra’ yang bermaksud “bacalah”. Ungkapan yang sering didengar ‘belajarlah kamu sehingga sampai ke negeri China’ juga jelas menunjukkan tentang kepentingan untuk menguasai ilmu. Dengan ilmu manusia mampu menguasai orang lain, dengan ilmu manusia berupaya mencapai kejayaan dan mengcapai kekayaan serta kebahagiaan, dengan ilmu yang tinggi juga sesuatu bangsa mungkin akan menguasai dunia. Misalnya, pada zaman keagungan Islam, cendekiawan-cendekiawan Islam berupaya mewujudkan pelbagai teori serta pendapat dan secara langsung menyemarakkan nama baik Islam di kaca mata dunia. Tidak kurang juga dikatakan dengan ilmu manusia mampu memusnahkan ekosistem, menyalahi peraturan kemanusiaan dan alam serta mencetuskan ketidakstabilan kepada keamanan dunia. Ini jelas, dengan kewujudan teori-teori pengklonan yang tidak realistik dan kegoaan saintis-saintis barat yang mencipta senjata-senjata kimia dan nuklear yang berbahaya serta bom-bom atom demi kepentingan peribadi masing-masing. Begitulah berkuasanya ilmu

dalam kehidupan manusia.

Menyedari tentang hakikat kepentingan ilmu pengetahuan ini, warga tentera harus terus mengorak langkah untuk menguasai pelbagai aspek ilmu pengetahuan. Setiap warga harus mempunyai inisiatif yang tinggi untuk membangunkan diri serta mempelajari dengan mendalam tentang aspek ilmu urusan kerja harian, ilmu teknologi maklumat, ilmu persenjataan moden serta segala ilmu sama ada yang berkaitan dengan dunia dan akhirat. Penguasaan pelbagai ilmu pengetahuan ini adalah sesuatu yang baik dan secara langsung boleh menyumbang kepada kecemerlangan serta memartabatkan lagi imej organisasi tentera di kalangan masyarakat umum.

PENUTUP

Sumber manusia adalah amat penting dalam membantu menjayakan matlamat, misi serta visi sesebuah organisasi. Apatah lagi dalam sebuah organisasi yang sentiasa berhadapan dengan risiko yang tinggi dan mencabar seperti organisasi tentera ini. Bertitik tolak dari kesedaran ini demi kemajuan organisasi ini, penekanan kepada aspek sumber manusia ini perlu diteruskan dan strategi-strategi pembangunan yang seimbang terhadap aspek ini harus digembleng dengan ikhlas oleh pemimpin dari pelbagai peringkat. Dalam masa yang sama, pegawai dan anggota perlu mempunyai kesedaran dalam diri dan menyedari sebagai warga tentera mereka harus mendukung hakikat keperibadian berikut:

- „ Memiliki jiwa seorang patriot dan pejuang yang bertakwa kepada Allah s.w.t.
- „ Memiliki sifat-sifat patriotisme dan berkelayakan dalam tugas dan tanggungjawab sebagai pendukung dan pembela bangsa.
- „ Bertekat sebagai perwira untuk memegang teguh disiplin, taat kepada segala perintah dari pemimpin serta menjunjung tinggi kehormatan dan nilai diri warga tentera.

- „ Sentiasa waspada, siaga dalam ilmu di dada demi keamanan dan keselamatan negara.
 - „ Menunjukkan kerelaan dan ketelusan sebagai perwira yang mengutamakan keperwiraan, keberanian moral dan fizikal dalam melaksanakan tugas serta sentiasa siap sedia berbakti kepada agama, nusa dan bangsa.
- Hakikat keperibadian warga tentera ini terkandung secara langsung dalam ciri-ciri sumber

manusia berkualiti yang telah digariskan. Jika setiap warga bersedia mengamalkannya dan jika pemimpin memberi kesinambungan berkesan untuk mendukungnya, ia pasti akan perkembangan yang amat baik kepada institusi tentera. Secara langsung ia mampu mewujudkan sumber manusia yang berkualiti tinggi, berdedikasi dan dikagumi oleh anggota masyarakat, di samping berupaya meningkatkan maruah organisasi tentera di kalangan umum.

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Kapt Rohana bte Mat Arshad adalah seorang pegawai graduan, ditauliahkan pada 11 Ogos 1997 ke dalam Kor Perkhidmatan Am (Pendidikan). Beliau memiliki Ijazah Sarjana Muda Ekonomi (Kepujian) dari UKM. Pernah memegang beberapa jawatan di pasukan dan Markas Formasi dan kini berkhidmat di MK 7 Bgd.

MILITARY ETHOS

— By : Jabatan Arah Infantri —

Kertas ini telah dipersembahkan oleh Jabatan Arah Infantri semasa Seminar Pegawai Memerintah Tentera Darat anjuran Markas Latihan TD di Impiana Resort Cherating pada 6 hingga 8 Julai 03.

PENDAHULUAN

Kejayaan Tentera Darat (TD) dalam sesuatu perang bergantung kepada keupayaan tempur ('fighting power') yang tinggi. Ia merupakan kombinasi komponen konseptual, fizikal dan moral. Komponen konseptual terdiri dari prinsip-prinsip perang, doktrin TD dan pembangunan, manakala komponen fizikal terdiri dari sumber manusia, peralatan, logistik, latihan dan kesiapsiagaan. Komponen moral pula terdiri dari motivasi, kepimpinan dan pengurusan. Ketiga-tiga komponen ini saling bergantungan di antara satu sama lain dan akan mempamerkan kekuatan sebenar TD. Komponen-komponen ini juga merupakan daya pengukur bagi menentukan keberkesanan sesuatu ketumbukan tentera dalam memikul amanah dan tanggung jawab yang diberikan. Etos ketenteraan yang akan dibincangkan merupakan sebahagian dari elemen yang terkandung di dalam komponen moral. Walaupun demikian, etos ketenteraan ini memberi impak yang besar terhadap keseluruhan keupayaan tempur bagi organisasi TD.

Fungsi utama ketenteraan adalah untuk memenangi perang. Di dalam sesuatu perang, keganasan, kekeliruan, ketidaktentuan dan perpecahan pasti berlaku. Etos ketenteraan merupakan tindak balas evolusi kepada perkara-perkara ini yang boleh mengurangkan kesan-kesan yang akan dihadapi semasa perang berlaku. Etos ketenteraan ini merupakan suatu semangat yang sentiasa hidup dan ianya lebih bersifat '*intangible*'. Oleh kerana ianya bersifat '*intangible*',

maka ianya adalah dinamik dan perlu dikawal selia supaya ianya sentiasa berada di tahap yang dikehendaki. Komitmen yang tinggi dari segi konseptual, fizikal dan moral diperlukan bagi mengekal dan menaikkan etos ketenteraan yang telah sedia wujud di dalam organisasi TD.

TUJUAN

Kertas ini bertujuan untuk mengenal pasti konsep etos ketenteraan bagi TD yang perlu dimiliki, dipupuk, dibajai dan dipraktikkan supaya sentiasa subur dan sebatи dalam organisasi TD serta cadangan pelan tindakan yang perlu dilaksanakan.

DEFINISI ETOS KETENTERAAN

Perkataan etos berasal dari bahasa Greek (Yunani) yang mana menurut kamus Oxford membawa maksud semangat dan kepercayaan (yang memberi watak keperibadian kepada sesuatu kumpulan, dan sebagainya). Berdasarkan tafsiran ini, terdapat dua elemen penting dalam perkataan etos iaitu semangat yang merujuk kepada sesuatu kesimpulan gambaran yang menyeluruh pemikiran dan tingkah laku kumpulan-kumpulan anggota atau orang di dalam organisasi, sementara kepercayaan pula adalah keyakinan terhadap kebenaran atau kewujudan yang baik atau sebaliknya. Ia akan mempengaruhi tindakan, perlakuan atau keputusan yang dibuat oleh seseorang bergantung kepada kepercayaan dan keyakinan yang dimilikinya. Ia merupakan ideologi ketenteraan yang wujud pada

individu terhadap organisasi ketenteraan keseluruhannya.

Menurut manual ‘*Values and Standards of the British Army*’, etos ketenteraan telah didefinisikan sebagai, “*That spirit which inspires soldiers to fight. It derives from, and depends upon, the high degrees of commitment, self-sacrifice and mutual trust which together are essential to the maintenance of morale*”. Definisi ini jelas memberi gambaran bahawa etos ketenteraan merupakan semangat dan dorongan untuk bertempur yang memerlukan komitmen yang tinggi, pengorbanan jiwa dan raga serta saling percaya-mempercayai di antara satu sama lain. Kesemua ini merupakan faktor-faktor penting terhadap mengekalkan moral ketenteraan mereka dalam melahirkan semangat juang yang jitu. Kesemua ini boleh dicapai apabila wujudnya kepercayaan dan keyakinan yang tidak berbelah bahagi terhadap pemimpin dan organisasi ketenteraan itu sendiri.

Seminar Kor Infantri yang diadakan di Riviera Bay Resort, Melaka pada 27 Mei hingga 30 Mei 2003 telah memutuskan definisi berikut diguna pakai:

“Satu set kepercayaan ketenteraan yang merangkumi nilai-nilai murni, norma-norma perkhidmatan dan pekerti yang digabungkan dengan pengamalan bagi mewujudkan suatu sinergi ke arah keberkesan dan kecekapan organisasi ketenteraan”.

Definisi ini juga memberi penekanan kepada kepercayaan seterusnya mempraktikkan kepercayaan tersebut dengan penuh yakin yang akhirnya akan memberi impak yang efektif dan efisien terhadap organisasi TD. Jelas di sini bahawa keyakinan lebih dari sekadar kepercayaan. Keyakinan tidak lebih dan tidak kurang, hanya operasi tenaga pemikiran dalam bentuk hasrat yang sungguh-sungguh, ditambah dengan harapan untuk memenuhinya. Keyakinan adalah pelengkap kepada kepercayaan. Dengan wujudnya keyakinan, maka amalan yang mempunyai hubung-kait dengan organisasi TD dapat dipraktikkan tanpa rasa ragu-ragu dan berbelah bahagi bagi menghasilkan semangat juang yang tinggi.

Kesimpulan Definisi

Definisi-definisi berhubung etos ketenteraan yang dibincangkan di atas mempamerkan terdapatnya persamaan dan saling berkaitan di antara satu sama lain. Oleh kerana ianya melibatkan semangat, perasaan, kepercayaan dan keyakinan, maka etos hidup dalam diri setiap warga tentera dan organisasi TD. Etos juga bersifat sebagai agen yang mengawal setiap tindak tanduk anggota tentera sesuai dengan kepercayaan dan keyakinan yang diterapkan. Ini bermakna, secara tidak disedari perlakuan seseorang cenderung kepada semangat berkumpulan mengatasi kepentingan peribadi.

Keupayaan tempur sesebuah organisasi tentera dapat dilihat dari komponen fizikal, konseptual dan moral. Ketiga-tiga komponen ini harus disatukan untuk melahirkan keberkesan yang sekata. Etos ketenteraan adalah satu-satunya elemen yang dapat menyatukan komponen-komponen tersebut. Tiada gunanya peralatan yang sofistikated, latihan yang terbaik dan moral yang tinggi sekiranya tiada unsur perasaan atau semangat kepercayaan dan keyakinan yang sanggup melalui situasi kegetiran dan ketidaktentuan peperangan. Perasaan atau semangat ini dapat digembung dan menukar ketiga-tiga komponen tersebut menjadi ‘Kuasa Unggul’ yang akan memastikan kemenangan dalam setiap pertempuran. Sejarah telah membuktikan bahawa pasukan-pasukan tentera yang kerdil seperti pejuang Chechen di Rusia, Mujahidin di Afghanistan semasa menentang Rusia dan tentera Vietkong di Vietnam semasa menentang Amerika Syarikat dapat mengalahkan pasukan lawan yang dikategorikan sebagai ‘superpowers’ pada masa tersebut yang mempunyai keupayaan tempur yang jitu. Perang Badar juga telah mempamerkan kepercayaan dan keyakinan tentera Islam kepada Allah Subhanahu Wataala dalam memenangi peperangan walaupun mempunyai bilangan tentera yang sedikit jika dibandingkan dengan pihak Quraisy. Ini jelas menunjukkan bahawa semangat, kepercayaan dan keyakinan terhadap pemimpin, organisasi dan rakan-rakan seperjuangan akan menghasilkan suatu semangat juang yang tinggi dan secara langsung akan melipat gandakan kekuatan ketenteraan yang telah sedia wujud.

Etos ketenteraan merangkumi kepercayaan dan keyakinan, nilai, adat, tradisi dan etika yang sentiasa diamalkan oleh institusi ketenteraan. Ia juga merupakan corak kehidupan bagi mereka yang menyertai bidang ketenteraan. Elemen-elemen ini menjadikan organisasi ketenteraan unik dari organisasi yang lain dan ianya mesti terus dipertahankan. Etos juga mencetuskan perasaan yang mendorong anggota tentera bertahan dan berkorban dalam apa jua keadaan dan cabaran.

Etos ketenteraan membawa erti kepercayaan dan keyakinan terhadap sekumpulan ciri-ciri moral yang ideal yang dapat mendorong dan menggembung seluruh organisasi TD menjadi lebih efektif dan efisien. Pendek kata, ianya mesti diperaktikkan dan diamalkan supaya terus menjadi tabiat yang positif. Akhirnya akan menjadi norma kehidupan ketenteraan dan seterusnya menjadi budaya dalam TD itu sendiri. Sungguhpun proses ini memakan masa, namun apabila etos ketenteraan ini telah menjadi budaya kepada organisasi TD, pelaksanaan seterusnya akan menjadi lebih mudah. Nilai-nilai ini amat penting dan perlu terus dipertahankan serta dijadikan sebagai budaya kehidupan tentera.

KEPENTINGAN ETOS KETENTERAAN KEPADA ORGANISASI TENTERA DARAT

Pengukuran terhadap keberkesanannya TD dalam melaksanakan tugasnya adalah melalui kejayaan dalam peperangan dan lain-lain operasi yang berkaitan. Ini bermakna setiap anggota TD adalah perlu menggalas, memikul senjata dan kesemuanya mesti bersiap-sedia mengambil keputusan untuk bertempur dengan musuh serta meletakkan diri mereka dalam keadaan yang getir dan kompleks. TD mestilah bersepada dalam melaksanakan tugasnya untuk bertempur apabila perlu, memusnahkan musuh berpandukan arahan yang diberikan dan sedia berkorban nyawa dalam menjalankan tugasnya. Perkara ini merupakan sifat semula jadi yang mulia dan unik bagi seorang tentera. Kesemua ini memerlukan nilai dan darjah yang tinggi terhadap komitmen individu dan kumpulan, pengorbanan, kesabaran dan saling mempercayai di antara satu sama lain. Selain itu,

kerja berpasukan dan moral adalah penting bagi sesuatu operasi mencapai kejayaan. Kesemua ini memerlukan latihan yang realistik, tidak mempersoalkan perintah yang diberikan oleh pihak atas dan mempunyai disiplin yang benar-benar kukuh. Semua ini boleh tercapai melalui pemahaman yang jelas berhubung etos ketenteraan.

Menurut Clausewitz, bagi meminimumkan kesan peperangan, ianya memerlukan latihan, disiplin, perintah, semangat tinggi pemerintah dan tradisi ketenteraan. Kesemua ini boleh diperoleh melalui etos ketenteraan. Perkara ini juga ditekankan oleh FM Slim apabila beliau menyatakan bahawa, "...*intangible force-the spirit which will move a whole group of people give their last ounce to achieve something without counting the loss to themselves*". Menyentuh tentang tradisi ketenteraan, Lt Kol H R Roach menegaskan, "*The maintaining of tradition is a tremendous unifying and driving force and the more experienced the soldier, sailor or airman the more he realises its value. We have all felt something of its power when marching behind a good hand. Every serviceman knows its meaning. It therefore behoves every initiated serviceman to convincingly explain to the newcomer the origin of each custom and the value of its retention. It is an integral part of service life*". Pendek kata, etos ketenteraan dapat melahirkan ciri-ciri kepahlawanan kepada setiap anggota tentera dengan mempunyai sifat-sifat berikut:

- „ Mengutamakan semangat setia kawan.
- „ Mengutamakan kepentingan organisasi melebihi daripada kepentingan peribadi.
- „ Sanggup berkorban walaupun terpaksa menggadaikan nyawa.
- „ Sentiasa mempunyai semangat yang terdorong untuk melaksanakan perkara-perkara yang mengatasi daripada batas yang diharapkan.
- „ Sentiasa bersatu dan bersepakat dalam apa jua keadaan.
- „ Tidak kenal menyerah kalah.

Bil	AS	Australia	United Kingdom	Warrior Ethos TD	Etos Kor Infantri	Cadangan
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1.	Loyalty	Courage	Selfless Commitment	Sacrifice	Percaya Kepada Tuhan	Belief in God
2.	Duty	Professionalism	Courage	Loyalty	Taat Setia	Loyalty
3.	Respect	Integrity	Discipline	Never Say Die	Sedia Berkorban	Sacrifice
4.	Selfless Service	Espirit de Corps	Integrity	Espirit de Corps	Berkorban	Discipline
5.	Honour	Initiative	Loyalty	Bravery	Disiplin	
6.	Integrity	Fairness	Respect for Others	Credibility	Maruah dan Kehormatan	Honour
7.	Personal Courage	Loyalty		Patriotism	Kejujuran dan keikhlasan	Integrity
8.					Profesionalisme	Professionalism
9.						Courage Espirit de Corps

Tegasnya, etos ketenteraan amat penting dalam melahirkan organisasi TD yang efektif dan efisien. Ianya bertindak sebagai perekat atau dalam bahasa Greek disebut *Philia* yang merangkumi 'friendship, comradeship and brotherly love'. *Philia* menyatukan dan mendorong individu yang datang dari berlainan bangsa, agama, etnik, bahasa, budaya dalam menghadapi suasana yang getir dan kritikal. Semangat kesatuan, kesepakatan dan berpasukan adalah ciri-ciri penting bagi menentukan kejayaan dalam perperangan.

Bagi menghasilkan konsep etos ketenteraan TD, kajian telah dibuat terhadap beberapa buah negara yang sering menjadi rujukan terhadap penggubalan doktrin TD. Berikut adalah perbandingan ciri-ciri berhubung etos ketenteraan:

Hasil dari kajian dan perbandingan tersebut, Jabatan Arah ini mencadangkan supaya elemen-elemen berikut diambil kira sebagai konsep etos ketenteraan TD:

- u *Belief in God.*
- u *Loyalty.*

- u *Sacrifice.*
- u *Discipline.*
- u *Honour.*
- u *Integrity.*
- u *Professionalism.*
- u *Courage.*
- u *Espirit de Corps.*

PLAN TINDAKAN TERHADAP ETOS KETENTERAAN TENTERA DARAT

Pelan tindakan ini dicadangkan adalah berasaskan kepada Ikrar Kesateria yang menjadi tuggak dan panduan kepada TD. Sungguhpun pelan tindakan ini digariskan secara berasingan, namun terdapat persilangan dan hubung kait di antara satu cadangan dengan yang lain. Selain dari itu, pelan tindakan ini juga mengambil kira faktor-faktor yang menjadi panduan pembinaan etos ketenteraan dalam perkhidmatan tentera di Amerika

Syarikat, United Kingdom dan Australia. Cadangan pelan tindakan penyuburan etos TD adalah seperti berikut:

Kepercayaan dan Keyakinan kepada Tuhan. Ia adalah satu keutamaan yang menjadi asas kepada pembinaan semangat juang tanpa mengira agama yang dianuti oleh seseorang individu. Untuk memupuk kepercayaan dan keyakinan ini maka adalah perlu:

- * Membentuk kerangka aktiviti kerohanian di peringkat TD yang menjurus ke arah penerapan kepercayaan dan keyakinan kepada tuhan.

- * Mewujudkan program kerohanian dan aktiviti keagamaan yang bersepada.

- * Anggota TD perlu ditanamkan dengan motivasi yang tinggi melalui bidang keagamaan. Segala unsur-unsur baik dan murni serta hukum-hakam yang termaktub dalam agama perlu dipraktikkan dan diamalkan. Mereka perlu mengetahui akan implikasinya apabila melanggar hukum tersebut. Perkara ini perlu dikaitkan dengan bidang ketenteraan yang mempunyai undang-undangnya sendiri dan tindakan akan dikenakan bagi mereka yang melanggar peraturan-peraturan yang telah ditetapkan. Undang-Undang ini merupakan langkah pencegahan ('deterrent') kepada semua peringkat anggota TD.

Taat Setia. Ia mengandungi unsur ekstrinsik iaitu perlakuan atau tindakan yang dapat dilihat dan dinilai serta unsur intrinsik iaitu unsur keikhlasan dan pengorbanan. Paduan kedua-dua unsur ini melahirkan taat setia yang kental dan membanggakan. Taat setia individu tentera perlu dizahirkan kepada organisasi dan pemimpin melalui:

- * **Organisasi** – memupuk kecintaan, kebanggaan, kepercayaan dan keyakinan terhadap organisasi melalui penerapan nilai sejarah, keceriaan dan kecantikan kem, kemudahan dan fasilitas yang wujud dalam

organisasi. Pengetahuan sejarah berhubung pasukan di mana mereka berkhidmat perlu dihayati sepenuhnya.

- * **Pemimpin** – ia mestilah memiliki ciri pemimpin yang diyakini di samping mengamalkan konsep pengurusan secara '*top to bottom and bottom up*'. Perlu ditekankan bahawa pemimpin diwujudkan untuk memimpin anggota mereka. Pemimpin harus dihormati, disegani dan anggota mestilah meletakkan taat setia yang tidak berbelah bahagi terhadap pemimpin mereka. Kesedaran berhubung perkara ini perlu ditanamkan kepada pemimpin dan anggota itu sendiri. Pemimpin juga mesti mendekatkan diri dengan anggota bawahannya ('*intimate communication*') dengan tidak meninggalkan anggota bersendirian. Penyebab utama kepada pemecatan Jen John C. Fremont dari pemerintahannya di Missouri pada 24 Okt 1861 oleh Abraham Lincoln adalah kerana, "*His cardinal mistake is that he isolates himself and allows nobody to see him; and by which he does not know what is going on in the very matter he is dealing with*". Oleh itu, '*Managing by Wandering Around*' (MBWA) adalah disyorkan supaya anggota dapat merasai kehadiran pemimpin mereka yang secara langsung memberi impak kepada moral anggota. Pasukan juga mesti menganggap bahawa lawatan pemimpin atasan ke pasukan mereka bukanlah sebagai satu bebanan, sebaliknya merupakan satu kekuatan dan semangat kesepaduan yang tinggi.

- * **Pengorbanan.** Organisasi TD memerlukan pengorbanan total daripada keseluruhan ahlinya demi meneruskan kredibilitinya pada masa hadapan. Pengorbanan berlaku seiring dengan keikhlasan, kerana tanpanya output pengorbanan adalah tawar dan hambar. Pengorbanan memerlukan seseorang meletakkan kepentingan organisasi mengatasi kepentingan diri dan ia terhasil dari dalam diri individu melalui kesedaran terhadap tugas, tanggungjawab, amanah dan harapan rakyat.

Disiplin. Ancaman kepada disiplin ketenteraan adalah persekitaran yang selesa dan menyeronokkan di samping kurangnya penguatkuasaan dan pengawasan oleh pihak yang diberi tanggung jawab. Untuk menyuburkan mutu disiplin, iaanya memerlukan:

* **Pembinaan Disiplin** - melaksanakan program yang terarah dan menyeluruh serta bermatlamat meninggikan mutu disiplin.

* **Penguatkuasaan** – dilaksanakan tanpa pilih kasih dan berasaskan kepada peraturan yang ditetapkan. Hukuman yang dijatuhkan mestilah adil dan saksama serta tiada mempunyai perasaan dendam. Ianya mestilah dirasai oleh anggota yang melakukan kesalahan dan menganggapnya sebagai satu iktibar di atas hukuman yang dijatuhkan kepadanya serta menjadi contoh dan teladan kepada anggota-anggota yang lain supaya tidak melakukan kesalahan yang sama. Program latihan penguatkuasaan yang berasaskan peraturan dan arahan perlu dilaksanakan.

Kehormatan. Penyuburan kehormatan dalam TD amat berkait rapat dengan perkembangan dan pembangunan individu. Kehormatan menyebabkan organisasi TD dipandang tinggi di mata rakyat dan secara tidak langsung ia memberi ruang kepada anggota TD mempamerkan keupayaan yang berkualiti. Kehormatan juga melambangkan keberkesan pengurusan dan pentadbiran organisasi. Pengurusan dan pentadbiran cemerlang menjana kehormatan kerana individu dalam organisasi merasai mereka diperlukan dan tanpanya organisasi tidak dapat berfungsi dengan berkesan. Anggota yang mempunyai kehormatan dan maruah yang tinggi sentiasa bersedia melindungi organisasi dan negara apabila keadaan memerlukan.

Kejujuran. Ia merupakan unsur intrinsik yang turut dikaitkan dengan kejernihan hati, amanah dan tulus. Jujur dan amanah merupakan hasil dari pendidikan dan asuhan dari kecil.

Kejujuran juga merupakan dasar yang terbaik untuk pembentukan taat setia dalam diri seseorang anggota dan saling percaya mempercayai sesama mereka serta terhadap pemimpin. Anggota mesti berupaya untuk mempercayai ketua dan arahan yang diberikan dengan sanggup untuk mempertaruhkan nyawa mereka. Kejujuran akan dapat memandu anggota ke arah tindakan yang positif dan berkesan. Kejujuran mestilah ikhlas dan sentiasa merupakan polisi yang terbaik. Kepercayaan, amanah dan kejujuran merupakan kualiti yang utama dan terpenting kerana kekuatannya dapat memberi kesan kepada anggota bawahan. Ia boleh dipupuk melalui aktiviti kerohanian dan aktiviti tidak formal di pasukan.

Profesionalisme. Mutu profesionalisme tentera dinilai berdasarkan pelaksanaan tugas yang cemerlang dan memenuhi objektif misi. Walau bagaimanapun, dari perspektif masyarakat awam, profesionalisme tentera diukur melalui keupayaan tentera melaksanakan tugas dan mewujudkan suasana aman dan selamat. Untuk meningkatkan mutu profesionalisme langkah berikut dicadangkan:

* **Kepercayaan** – memberi kepercayaan ('trust') untuk merancang dan melaksanakan tugas kepada semua peringkat pemimpin dan anggota bersesuaian dengan fungsi mereka. Kepercayaan merupakan perekat ('glue') di antara ketua dengan anggota bawahan mereka.

* **Kursus dan Latihan** – kursus yang bersesuaian dan menepati bidang tugas serta tanggung jawab seseorang anggota hendaklah dilaksanakan dengan tersusun. Anggota juga perlu dilibatkan dengan latihan individu dan kolektif yang dapat meningkatkan mutu profesionalisme tugas mereka.

* **Pendidikan Tidak Formal** – pendekahan anggota tentera terhadap sistem dan budaya dalam sesebuah organisasi diterapkan melalui pendidikan tidak formal.

Kajian terhadap sejarah ketenteraan berhubung tanah air dan negara-negara luar harus didedahkan kepada semua peringkat anggota. Kajian terhadap individu-individu yang menjadi pemimpin perang yang masyhur juga hendaklah dijadikan sebagai salah satu dari aktiviti pasukan. Walau bagaimanapun, ia perlu dirancang dan dilaksanakan dengan tersusun bagi mengelakkan pembaziran.

Pengetahuan. Pengetahuan berhubung profesi ketenteraan harus dimiliki dan diperaktikkan oleh semua peringkat anggota. Mereka juga mesti memahami dan mengetahui bahawa perkhidmatan mereka dicurahkan sepenuhnya kepada TD. Komitmen terhadap tugas primer ini hendaklah diutamakan terlebih dahulu dengan mengetepikan kepentingan-kepentingan peribadi. Segala pengetahuan dan pengalaman yang dimiliki dan diperoleh mesti diperaktikkan selaras dengan kehendak organisasi.

Keberanian. Keberanian mengandungi dua unsur utama yang boleh dipupuk iaitu keberanian fizikal ('physical courage') dan keberanian moral ('moral courage'). Ia merupakan asas dalam membentuk kekuatan semangat juang yang berupaya mendorong warga TD melaksanakan tugas tanpa mengira rintangan dan bahaya yang akan dihadapi. Keberanian di kalangan pemimpin adalah lebih kritikal kerana tindakannya akan mempengaruhi organisasi dan orang yang dipimpinnya. Komponen utama dalam pembinaan keberanian terdiri daripada dua unsur iaitu kerohanian dan intelektual. Justeru, untuk memupuk semangat juang, maka gabungan pembinaan kerohanian dan intelektual perlu dilaksanakan secara bersepadu.

Semangat Setia Kawan. Semangat ini lahir dari komitmen, tanggung jawab, semangat cintakan organisasi, pemimpin dan sesama sendiri. Selain itu, kerja berpasukan juga menyumbang kepada lahirnya semangat ini.

Aktiviti-aktiviti yang dilaksanakan di pasukan harus diberi penekanan terhadap kerja secara berpasukan. Ini akan melahirkan semangat kerjasama yang erat, kemegahan dan kecintaan terhadap pasukan. Oleh itu, anggota tidak boleh ditinggalkan bersendirian dan perasaan '*sense of belonging*' mesti diwujudkan supaya rasa kekitaan, bangga dan megah ditanamkan pada diri mereka.

PENUTUP

Etos ketenteraan adalah suatu unsur kekuatan yang '*intangible*' dan boleh menggerakkan anggota-anggota tentera melakukan apa sahaja termasuk berkorban nyawa dalam mencapai sesuatu misi. Ringkasnya, ia merupakan elemen penturu kepada keberkesanan dan kecekapan serta kejayaan dalam pertempuran bagi sebuah angkatan tentera di medan peperangan. Oleh itu, adalah penting bagi setiap peringkat anggota TD menghayati dan menjawai etos ketenteraan secara berterusan dan perlu disubur serta dipertingkatkan dari masa ke semasa.

Etos merupakan elemen moral yang penting dan ia mesti ditanam di dalam setiap sanubari setiap peringkat anggota TD. Anggota merupakan aset dan senjata utama kepada peperangan, manakala moral anggota merupakan satu-satunya faktor terpenting dalam peperangan.

Kekuatan etos ketenteraan perlu dipupuk dan dibajai agar terus berkembang dan sebatik dan dijadikan sebagai budaya kehidupan TD. Usaha dan amalan yang berterusan perlu dilaksanakan agar perkara ini dapat direalisasikan sepenuhnya. Kepentingan etos ketenteraan seharusnya tidak dipandang rendah dan pembangunannya perlu diselaraskan dengan pembangunan elemen-elemen keupayaan tempur yang lain. Ini perlu bagi melahirkan pasukan TD yang benar-benar mantap, digeruni dan berkesan dalam mempertahankan kedaulatan agama, bangsa dan negara selaras dengan cogan kata 'TD-Teras Utama Kedaulatan Negara'.

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REVOLUSI EHWAL TENTERA (RMA)

— By : Kapt Saiful Nizam bin Che Soh —

PENGENALAN

Peperangan, tidak kira walau apa pun kata hati, ia merupakan teras kepada kehidupan, ianya melambangkan bagaimana ekspresi manusia yang amat hebat dalam usaha mendapatkan makanan, tempat tinggal serta kehendak bagi mendapatkan keselamatan, kuasa dan kepuasan diri. Boleh kita andaikan di sini punca terjadinya peperangan adalah disebabkan oleh manusia yang cuba mengambil kesempatan di atas kelebihannya ke atas manusia yang lain. Boleh juga diterima "Peperangan adalah satu penerapan nilai politik melalui kekuatan". Bagi mencapai objektif ini sesuatu pihak akan memikirkan cara-cara yang lebih hebat dari pihak lawannya. Apa yang perlu difikirkan di sini, cara-cara tersebut bukanlah bergantung terhadap kehendak tetapi terhadap sumber-sumber keupayaan yang dimiliki oleh sesuatu pihak. Pada zaman batu contohnya, manusia sentiasa mengharapkan ada senjata yang lebih baik dari senjata yang dibuat dari api atau batu. Ianya mustahil sehingga penemuan gangsa sekitar tahun 1400 sebelum Masihi. Logam besi telah ditemui oleh masyarakat Mesir sekitar tahun 3000 sebelum Masihi, tetapi kegunaannya bagi pembuatan senjata hanya diperlakukan sekitar tahun 800 selepas Masihi, mungkin juga terdapat peralatan-peralatan lain yang digunakan selepas penemuan gangsa. Semua ini menggambarkan bahawa betapa penting dan bernilainya perhubungan antara teknologi dan peperangan.

Dunia sekarang ini berada di penghujung perubahan zaman industri kepada zaman berasaskan teknologi maklumat. Revolusi maklumat ini merupakan kelebihan yang didapati daripada teknologi maklumat komputer, teknologi telekomunikasi dan inovasi dalam teori pengurusan dan organisasi. Kepesatan dan kepentingan teknologi ini telah mengancam teknik-teknik

peperangan secara tradisional di dalam pertempuran. Secara jelasnya ini boleh dilihat sebagai cabaran terhadap organisasi ketenteraan konvensional dan hierarki kawalan konvensional tidak kira di mana juga institusi-institusi ketenteraan ini berada. Ini membolehkan kita berhubung, memproses dan menganalisis pelbagai pengguna secara serentak. Semua perubahan ini telah mengubah konsep peperangan itu sendiri sehingga ke satu tahap pemerhati ketenteraan telah melabelkannya sebagai "*Revolution in Military Affairs (RMA)*" atau "*Third Wave Warfare*".

EVOLUSI RMA

Revolusi di dalam ehwal ketenteraan berlaku apabila berlakunya perubahan terhadap gabungan teknologi, organisasi, sosial, doktrin dan politik. Ianya hasil dari faktor perubahan ekonomi dan kesan terhadap perancangan ketenteraan, peralatan serta latihan untuk menghadapi peperangan. Kebanyakan ahli penganalisis dan penterjemah strategik percaya Revolusi Ehwal Tentera telah wujud pada dua dekad terakhir abad ke 20¹.

Definisi.

◦ **Revolusi (Revolution).** Revolusi biasanya merujuk kepada sesuatu perubahan besar di dalam hal ehwal kehidupan manusia. Ia melibatkan banyak perubahan dan merupakan satu peningkatan perubahan yang nyata. Ianya mungkin tidak disedari atau dinilai pada ketika itu tetapi dihargai setelah dikaji oleh ahli sejarah. Kerap kali ianya difikirkan lebih awal oleh individu-individu tertentu bertujuan menggantikan sesuatu yang telah sedia ada.

¹ Journal of Intelligence Affairs, Spring 1998, Vol 51, Issue 2, ms 431.

- **Ehwal Tentera (Military Affairs).**

Merujuk kepada organisasi dan aplikasi angkatan tentera bagi sesuatu negara. Di dalam konteks ini, ianya untuk menyatakan sesuatu revolusi dalam ehwal tentera dan boleh merujuk kepada perubahan besar terhadap organisasi dan aplikasi ketenteraan atau keadaan semula jadi sesuatu negara atau kombinasi kedua-duanya sekali.

- **Revolusi Ehwal Tentera (Revolution in Military Affairs).** Revolusi Ehwal Tentera boleh dikatakan sesuatu perubahan besar terhadap corak peperangan. Ini berlaku disebabkan inovasi terhadap teknologi baru yang menggabungkan perubahan di dalam doktrin ketenteraan dan operasi serta konsep organisasi. Ianya juga mengubah teras kepada ciri-ciri dan perlaksanaan sesuatu operasi ketenteraan. Revolusi Ehwal Tentera juga melibatkan perubahan struktur kekuatan terhadap kuasa-kuasa tentera moden. Secara keseluruhan ianya akan membentuk pelaksanaan peperangan pada masa hadapan.

Peringkat Evolusi. Berpandukan kepada sejarah ketenteraan, Revolusi Ehwal Tentera telah wujud sekian lama. Evolusi ini telah mengambil tempat dalam semua tahap atau peringkat yang tercatat di dalam sejarah peperangan. Di antara Revolusi Ehwal Tentera yang terdahulu dan tercatat sebagai sejarah adalah seperti berikut:

- **Revolusi Serbuk Peledak Meriam.**

Pada 1232 SM, serbuk peledak meriam telah dicipta oleh bangsa Cina². Penghasilan serbuk peledak telah memberi perubahan besar kepada peperangan. Ianya dapat memberikan kelebihan dan kuasa membunuh atau memusnah di dalam peperangan. Serbuk peledak telah mengubah peperangan di darat dan di laut melalui penggunaan meriam ‘siege’, artileri medan, senjata infantri dan artileri tentera laut.

- **Revolusi Perancis dan Era Napoleon.**

Revolusi Perancis berlaku pada tahun 1789 SM³. Revolusi Ehwal Tentera telah tercipta dari

pelbagai sumber tetapi tidak kesemuanya tercipta disebabkan oleh perubahan teknologi. Semasa Revolusi Perancis dan Era Napoloen perubahan sosial telah menyumbang kepada revolusi ketenteraan semasa peperangan. Bagi menghadapi jumlah musuh yang besar, pembesaran angkatan tentera Perancis telah dilaksanakan.

- **Perang Dunia Pertama.** I a n y a

merupakan peperangan yang menggunakan kubu pertahanan sehingga penggunaan kereta kebal di perkenalkan. Semasa peperangan ini pengenalan awal kepada teori kimia dan fizik telah banyak memberi peningkatan yang kritikal. Disebabkan penggunaan meluas serbuk peledak, kadar tembakkan sesuatu senjata dan jarak penerbangan projektil ke sasaran yang akan menentukan keadaan sesuatu pertempuran. Perubahan-perubahan ini memberikan impak yang besar terhadap peperangan pada ketika itu.

- **Perang Dunia Kedua.** Sistem dan

teknologi baru yang tercipta pada ketika ini telah memberi kesan besar kepada Revolusi Ehwal Tentera sungguhpun ianya boleh terjadi dari pelbagai penyebab lain. Antara ciptaan yang wujud ketika perang dunia ini ialah pihak tentera Jerman memperkenalkan konsep peperangan armor, peperangan amfibia oleh pasukan marin, kapal pengangkut oleh tentera laut dan pengeboman strategik oleh tentera udara. Semua konsep ini dikatakan telah memberi kesan kepada revolusi peperangan. Kajian fizik yang lebih dalam telah meningkatkan keupayaan radio dan penciptaan radar dan yang lebih hebat lagi ialah penciptaan senjata nuklear di penghujung peperangan. Revolusi pada ketika peperangan ini boleh dikatakan telah mencapai tahap kematangan yang sepenuhnya.

- **Revolusi Nuklear.** Merupakan satu jenis

Revolusi Ehwal Tentera yang amat berbeza. Ianya adalah sistem Revolusi Ehwal Tentera yang wujud di penghujung Perang Dunia Kedua. Revolusi nuklear ini tercetus sekitar tahun 1940an sehingga 1950an di mana teknologi utamanya di kenali sebagai ‘nuclear fission/fusion’.

- **RMA Masa Kini.** Sumber utamanya adalah menjurus kepada prinsip-prinsip fizik yang terkini.

² Robert H. Scales JR, Fire Power in Limited War, Presido Press, 1998, ms 88.

³ Maj Gen J.F.C Fuller, The Conduct of War, Ali Majeed Printers, 1998, ms 31.

Prinsip-prinsip ini lebih memfokuskan kepada teknologi seperti laser, mikrocip dan 'particle beams'. Ini membuktikan revolusi yang terdapat kini merupakan satu integrasi sistem Revolusi Ehwal Tentera. Semua reka cipta yang berlaku secara drastik ini menjurus kepada satu sistem ketenteraan yang maju. Kesemua sistem ini bila digabungkan bersama konsep operasi dan organisasi akan membentuk satu integrasi sistem. Jika dibandingkan pembangunan sebelum era ini, pendekatan sistem ini lebih kepada mengumpul semua kekuatan setiap sistem menjadi satu.

Situasi Semasa. Kajian ke atas Revolusi Ehwal Tentera pada masa dahulu mencadangkan tiga keadaan bagi memenuhi kehendak Revolusi Ehwal Tentera pada masa kini.

- **Pembangunan Teknologi.** Revolusi Ehwal Tentera banyak dibantu oleh perubahan teknologi. Semua teknologi ini tidak semestinya dicipta bagi tujuan ketenteraan tetapi ia merupakan teknologi yang sama digunakan secara meluas bagi tujuan komersial. Oleh itu, revolusi ketenteraan yang berdasarkan teknologi bukan sahaja penting tetapi ianya juga menentukan kejayaan ekonomi secara keseluruhannya bagi sesebuah negara.

- **Inovasi Operasi atau Pembangunan Doktrin.** Amunisi masa kini lebih berteknologi tinggi di mana ia dapat menyalurkan informasi terkini kepada sistem panduan yang tepat melalui arahan digital dengan menggunakan sistem konvensional. Ini menjadikan operasi pengeboman menjadi lebih tepat kepada Sasaran. Keadaan ini amat memerlukan satu doktrin operasi yang inovatif bagi membolehkan Revolusi Ehwal Tentera diadaptasikan.

- **Adaptasi Organisasi.** Corak organisasi masa hadapan telah boleh diperhatikan semasa Perang Teluk pada tahun 1991 dan 2003. Organisasi moden ini banyak bergantung kepada sistem informasi dan komunikasi bagi penyampaian maklumat. Seorang komander kini boleh mendapatkan bantuan dari orang bawahan dan organisasi lain yang berada beribu-ribu batu jauhnya bagi membantu membuat perancangan dalam masa beberapa

jam sahaja. Ini membuktikan sistem organisasi dahulu tidak akan dapat wujud pada situasi Revolusi Ehwal Tentera masa kini.

TREND MASA HADAPAN RMA

Peperangan Maklumat. Peperangan ini melibatkan satu sistem maklumat di mana segala peralatannya akan memberi kesan ke atas organisasi dan operasi ketenteraan. Ianya merupakan satu usaha di antara dua atau lebih negara bagi menguasai ruang pertempuran maklumat. Pada peringkat nasional, ia merupakan satu jenis konsep peperangan strategik. Manakala, di peringkat operasi ketenteraan pula ianya memberi kesan besar terhadap bagaimana peperangan itu dilaksanakan. Penggunaan sepenuhnya sistem komunikasi moden bagi menguasai maklumat merupakan satu cara di mana pasukan sahabat memperoleh maklumat lengkap berkenaan keadaan medan pertempuran. Melalui maklumat ini kajian terhadap pasukan sahabat, musuh dan ruang neutral dapat digunakan bagi memenuhi kehendak politik dan objektif ketenteraan. Peperangan maklumat menggunakan operasi psikologi (*psychological operations*), Peperangan elektronik, operasi tipu helah (*deception operation*), operasi keselamatan, penonjolan kekuatan dan objektif yang hendak dicapai.

Peperangan Elektronik. Peperangan elektronik kini menjadi salah satu teras di dalam peperangan. Tiada sistem persenjataan pada masa kini yang boleh dikatakan tidak bergantung kepada sistem komunikasi dan sistem elektronik sebagai sistem panduannya seperti yang terdapat pada misil atau projektil yang boleh dikatakan bebas dari sebarang kerosakan. Peranan utama peperangan elektronik ialah untuk memusnahkan atau sekurang-kurangnya mengurangkan keupayaan persenjataan tersebut berfungsi. Pihak Rusia merupakan pelopor kepada penggunaan peperangan elektronik sebagai salah satu dari sistem persenjataannya dan menyediakan doktrin berkenaan peperangan elektronik bagi membolehkan ia sehaluan dengan operasi ketenteraan yang lain. Manakala Amerika Syarikat pula menjadikan Peperangan Elektronik sebagai cabang ketenteraan yang lain iaitu operasi ketenteraan konvensional⁴.

⁴ Brig Gen Ahmed Nawaz Zafar, "EW" Pakistan Army Green Book, 1998, ms 208.

Peperangan Siber. Merupakan penggunaan sumber manusia di dalam alam siber menerusi pencerobohan sistem komputer bagi mengganggu gugat sistem komputer musuh dan integrasi bersama dengan pasukan sahabat. Seorang saintis barat, John Anger telah memberi satu gambaran tentang peperangan siber ini. Beliau telah mendefinisikan peperangan siber ini sebagai satu tindakan yang diambil untuk memperoleh kelebihan informasi dengan mengelirukan musuh⁵. Peperangan Siber juga boleh melibatkan komander melalui (rangkaian C4I yang menyeluruh), peperangan psikologi (laman internet bagi propaganda dan rangkaian organisasi) dan perisikan (melalui pencerobohan sistem maklumat musuh bagi mendapatkan maklumat). Bagi mereka yang belum mengenali tajuk ini akan berfikir ianya tidak lebih dari teori yang hangat diperkatakan dan tidak ada kena mengena dengan peperangan sebenar. Walau bagaimanapun, pada 25 Jun 1996 pengarah CIA (menurut bahagian perkhidmatan perundungan) menyatakan "ancaman peperangan siber kini menjadi semakin nyata, saya yakin penggodam komputer, organisasi pengganas atau negara lain mungkin menggunakan teknologi ini sebagai salah satu alat bagi mengkoordinasi serangan yang boleh menjaskan rangkaian kuasa elektrik, pusat kawalan trafik udara (*air traffic control*), perdagangan antarabangsa dan atur gerak kuasa tentera". Oleh itu, kita tidak boleh bertanggapan perkara ini sebagai khayalan tetapi sebagai satu ancaman yang nyata. Secara realitinya dari satu sudut dapat memberikan gambaran iaitu pada abad ke-21 tugas penembak curi mungkin digantikan oleh penggodam komputer, bagi mencuri maklumat yang penting dari sesuatu tempat yang jauh. Virus komputer akan menjadi ancaman kepada mereka yang tidak berjaga-jaga dan medan pertempuran kini akan diukur berdasarkan keupayaan sesuatu negara itu mengaplikasikan peperangan siber itu sendiri. Semua ini akan meneruskan lagi konflik yang ada ke suatu dimensi yang baru. Tiada satu pun perihal ini adalah mimpi atau sekadar teori, ianya wujud dan amat berbahaya seperti juga persenjataan perang yang lain⁶.

Peperangan Media. Ia selalunya disebarluaskan melalui aset-aset percetakan, radio dan televisyen. Peperangan ini dikatakan "Soft War". Dengan bantuan teknologi moden, keupayaan memerhatikan

aktiviti dan mempengaruhi pemikiran melalui suatu kempen media yang efektif boleh dilihat meningkatannya. Semasa Perang Teluk yang kedua dalam bulan Mac 2003 di antara negara-negara bersekutu (Amerika Syarikat dan United Kingdom) dengan negara Iraq, negara-negara bersekutu telah menggunakan media massa dan media elektronik secara menyeluruh bagi mempengaruhi rakyat jelata Iraq untuk menyokong tindakan yang dilakukan oleh tentera bersekutu dan menggulingkan Presiden Iraq, Saddam Hussien yang dikenali sebagai pemerintah rejim. Strategi yang digunakan oleh pasukan bersekutu ini adalah untuk mempengaruhi minda dan pengaruh rakyat Iraq yang dikenali sebagai operasi psikologi.

Teknologi Masa Hadapan. Sebahagian dari teknologi baru yang dapat memberikan kesan ke atas ehwal ketenteraan dan peperangan masa hadapan dinyatakan seperti di bawah. Semua ini boleh dianggap sebagai ciri-ciri peperangan masa hadapan:

- Robotik.
- Teknologi alam siber.
- Struktur rangkaian.
- Pengumpulan data dan sasaran melalui pelbagai pengesan.
- Teknologi mikrocip.
- Integrasi kepada perintah dan kawal menggunakan transmisi pada kelajuan yang amat tinggi.
- Teknologi laser.
- 'Precision Guidance Missile' (PGM).
- Serangan 'stand off' misil.
- Teknologi satelit.
- Teknologi 'infra-red' (Infra merah).
- Mikro elektronik.

Medan Tempur Masa Hadapan.

◦ Penumpuan Maklumat Medan Tempur di Masa Hadapan. Penumpuan maklumat ini akan menggunakan data digital bagi membolehkan senjata panduan di arahkan tepat ke sasaran penting ketenteraan. Sebarang pergerakan ketenteraan akan dirasai sukar untuk menipu perisikan musuh mereka. Segala pergerakan ini akan dapat diramalkan

⁵ www.klc.ac.uk/org/icsa/old # 6.

⁶ Maj Azhar S Ibrahim, Battle Field of the 21st Century, Pak Army Green Book, 1998, ms 214.

⁷ RMA by Cheng Maglines, Views of Future Wars, Part 4.

berdasarkan segala maklumat yang terdapat dalam 'data bank' (bank maklumat) pihak lawan. Segala strategi, taktik dan kempen ketenteraan yang menggunakan acuan ini pada masa hadapan akan berbeza dari apa yang terdapat pada masa kini. Perbezaan di antara ketiga-tiga ini akan menjadi kabur dan kandungan khusus bagi setiap perkara di atas akan mengalami perubahan⁷.

Medan Tempur Digital. Medan pertempuran ini merupakan satu gabungan sistem rangkaian yang meliputi seluruh ruang operasi. Ia terdiri dari sistem komunikasi, sistem perintah dan kawal, sistem penerimaan perisikan, pengkalan data medan tempur dan terminal pengguna. Kesemua ini akan dapat memberikan pengguna maklumat berkenaan operasi pada masa sebenar. Di masa hadapan sistem ini boleh menghantar maklumat dalam bentuk suara, grafik, teks dan data serta dapat memberikan maklumat dan keadaan medan tempur sebenar kepada pengguna berdasarkan maklumat yang sedia ada di dalam pengkalan data⁸.

Konsep Pertempuran Masa Hadapan.

- Pertempuran Darat pada Masa Hadapan. Ia akan mempunyai ciri-ciri seperti berikut:
 - Pertempuran akan mempunyai lebih dimensi dan arah. Pertempuran akan berlaku pada kedalaman dan di jarak yang lebih jauh. Ia melibatkan dimensi tanah, laut, udara, air, bawah permukaan dan ruang angkasa. Medan tempur tidak lagi menentu. Pertempuran udara akan menguasai ke semua ini.
 - Masa dan kepantasan akan menjadi perkara yang bernilai. Masa operasi akan menjadi lebih pendek disebabkan oleh kepantasan. Kepantasan strategi dan pergerakan taktikal akan membawa makna yang baru kepada masa.
 - Kuasa dan ketepatan serangan akan menjadi lebih terancang dan efektif. Ini semua akan menyebabkan kemusnahan sasaran-sasaran strategik dan taktikal menjadi lebih nyata.

- Penguasaan maklumat akan menjadi tumpuan penting di medan tempur.
- Akan terdapat lebih integrasi terhadap operasi darat dan koordinasi bagi operasi bersama. Ia akan menjadikan satu pertempuran yang mempunyai daya mobiliti dalam semua keadaan cuaca dan waktu.
- Melalui rangkaian maklumat digital C4I sistem persenjataan dan perlaksanaan akan dihubungkan secara digital. Semua aspek medan pertempuran akan dapat dikoordinasi secara digital.
- Garisan pertahanan di antara barisan hadapan dan belakang akan menjadi tidak menentu. Sempadan akan hilang kepentingannya.
- Penumpuan tembakan akan digantikan dengan penumpuan kekuatan tempur.

Pertempuran Jarak Jauh. Dengan pembangunan sistem persenjataan pemusnah jarak jauh akan menjadikan pertempuran jarak jauh satu corak operasi peperangan pada masa hadapan. Terdapat tiga corak pertempuran jarak jauh di masa hadapan iaitu⁹:

- Sistem persenjataan yang dibawa oleh pesawat udara yang mana iaanya mampu melakukan serangan atau dilancarkan di jarak yang jauh.
- Kombinasi di antara pelancaran senjata di jarak jauh dengan pergerakan terup jarak jauh melalui jatuh udara (*air drop*) seperti pasukan payung terjun (pasukan Para dan Komando).
- Melalui pertempuran lima dimensi iaitu udara, darat, laut, ruang angkasa dan pertempuran elektro magnetik jarak jauh.

Pertempuran Angkasa Lepas. Ianya didorong oleh kejayaan dari teknologi maklumat dan lain-lain teknologi terkini seperti satelit dan kapal angkasa. Konsep baru persenjataan seperti laser dan sistem persenjataan elektro

⁸ Ibid.

⁹ The Military Revolution by Chein, Human Contemporary Military Affairs, March 1996.

magnetik akan digunakan sebagai satu kesinambungan aliran persenjataan yang terkini. Semua persenjataan ini akan menjadikan angkasa lepas satu lagi medan pertempuran selepas lima lagi dimensi yang dinyatakan di atas. Walau bagaimanapun, persenjataan ini amat memerlukan bantuan dari satu pengkalan di angkasa lepas untuk berfungsi. Jika pengkalan ini hilang atau musnah ia akan menjadi lemah dan tidak berkuasa lagi¹⁰.

KEKURANGAN REVOLUSI EHWAL TENTERA DI DALAM ORGANISASI ANGKATAN TENTERA MALAYSIA

Terdapat kekurangan-kekurangan yang dikenal pasti di dalam mengimplementasikan Revolusi Ehwal Tentera dalam organisasi Angkatan Tentera Malaysia (ATM) terutama di peringkat nasional, strategik dan taktikal. Kekurangan dan kelemahan adalah seperti berikut:

- **Peringkat Nasional.**

- **Asas Perindustrian.** Kita tidak memiliki perindustrian yang betul-betul dapat memenuhi permintaan bagi pembangunan persenjataan dan amunisi moden. Oleh itu, kita terpaksa bergantung kepada negara barat bagi persenjataan dan amunisi yang bukan sahaja mahal tetapi tidak dapat menampung sepenuhnya apabila diperlukan.

- **Ekonomi Tidak Kukuh.** Sejak kebelakangan ini keadaan ekonomi negara yang tidak menentu menyebabkan usaha-usaha untuk memodenkan angkatan tentera kita terjejas. Keadaan ini amat ketara sekali semasa negara mengalami kegawatan ekonomi pada tahun 1997 dan 1998.

- **Teknologi.** Kekurangan pengetahuan individu di dalam teknologi berkenaan persenjataan amat ketara. Ini disebabkan taraf pendidikan yang kurang bermutu dan tidak bersistematis. Situasi ini menjadi lebih teruk disebabkan oleh pengaliran ke luar para

cendekiawan dan pakar-pakar terutama ke negara-negara yang lebih maju. Saban hari ramai cendekiawan negara yang terdiri dari golongan doktor, jurutera dan cerdik pandai meninggalkan negara ini bagi mencari peluang pekerjaan yang lebih baik di negara luar.

- **Polisi yang Tidak Konsisten.** Kita memiliki rekod sebagai sebuah negara yang tidak memiliki polisi yang konsisten. Ini akan menjelaskan pembangunan negara ke arah yang sebenar.

- **Kestabilan Politik.** Sejarah telah membuktikan hanya negara yang kedudukan politiknya stabil sahaja akan dapat meneruskan usaha-usaha ke arah pembangunan negara. Kerajaan dan rakyat yang stabil serta aman akan mempunyai masa yang secukupnya untuk merancang dan membangunkan negara.

- **Peringkat Strategik.**

- **Kekurangan Infrastruktur.** Tanpa rangkaian perhubungan yang baik terutama di bahagian pendalaman Pantai Timur Semenanjung Malaysia, Sabah dan Sarawak, kita tidak akan dapat merasai kebaikan dari revolusi ini. Kita perlu mempercepatkan lagi pembangunan-pembangunan infrastruktur ini.

- **Sumber Semula Jadi.** Bagi memenuhi keperluan revolusi ini kita hendaklah meneroka dan menggunakan sepenuhnya segala sumber semula jadi yang sedia ada dan yang belum diterokai/dimiliki.

- **Penerokaan Teknologi Masa Hadapan.** Pengkajian yang khusus dan analisis banyak membantu kita mendapatkan teknologi yang murah dan senang digunakan seperti Teknologi Maklumat, Siber dan sebagainya. Kita hendaklah menjadi peneroka kepada semua aspek teknologi canggih yang terkini.

- **Koordinasi pada Peringkat Tertinggi.** Terdapat kekurangan koordinasi pada peringkat markas, ini menjadikan

¹⁰ Ibid.

sumber yang dimiliki terabai guna. Oleh itu, perlulah diwujudkan satu organisasi pertahanan pada peringkat tertinggi seperti NSC (*National Security Council*) dan menghidupkan peranan Markas Gabungan Tiga Perkhidmatan (*Joint Staff Headquarters*).

- **Program Angkasa Lepas.** Sekarang ialah masanya untuk kita mengadakan polisi bagi program ini bagi tujuan pertahanan dan juga peningkatan hasil ekonomi.

- **Program Misil.** Sebagai reaksi terhadap musuh yang tidak dijangka sama ada di darat, laut dan udara, kita perlu melipat kali gandakan usaha dan struktur kewangan bagi mewujudkan program misil negara dengan peningkatan sistem misil jarak jauh dan sederhana.

◦ **Peringkat Taktikal.**

- **Konsep dan Doktrin.** Kita perlu mengubah dasar ini bagi memenuhi keperluan pertempuran dan medan tempur masa hadapan. Perubahan-perubahan ini hendaklah selari dengan ancaman yang dihadapi masa kini dan masa hadapan (*future war*).

- **Struktur Organisasi.** Organisasi ketenteraan kita memerlukan satu perubahan di mana perubahan ini akan membolehkan kita bertindak balas dengan pantas dan cekap.

- **Peralatan dan Persenjataan.** Persenjataan yang baru dan kos efektif hendaklah diperoleh bagi menggantikan persenjataan yang lama dan tidak lagi efektif sebagai persenjataan utama. Kita perlu mencari pengeluar yang dapat memenuhi ciri-ciri dan kehendak ini.

- **Penilaian yang Berterusan.** Ketiadaan proses penilaian yang berterusan menjadikan sistem persenjataan menjadi lapuk. Kekurangan proses penilaian ini terjadi dari peringkat akar umbi lagi.

- **Latihan.** Latihan tanpa kesungguhan lebih

teruk lagi dari tiada latihan langsung. Oleh itu, kita perlu mempunyai satu sistem latihan yang baik dan mempunyai matlamat bagi mencapai maksud latihan itu sendiri.

- **Ketidakseimbangan Kuasa.** Kita mempunyai masalah ketidakseimbangan kuasa berbanding dengan negara-negara jiran di sekeliling kita. Oleh itu, kita perlu mengadaptasi teknik-teknik moden bagi perintah dan kawal, pengumpulan maklumat perisikan, persediaan medan tempur dan sebagainya bagi mengatasi masalah ini.

CADANGAN

Peringkat Nasional.

- Pada masa sekarang ini perlulah diberi penekanan yang serius dalam aspek Revolusi Ehwal Tentera terutama di dalam organisasi Angkatan Tentera Malaysia. Teknologi Maklumat merupakan salah satu cabang Revolusi Ehwal Tentera yang amat penting pada masa kini. Keutamaan perlulah diletakkan kepada teknologi ini bagi membaiki tahap buta komputer dengan menanam budaya celik komputer. Ini memerlukan penubuhan lebih banyak pusat pengajian tinggi seperti politeknik dan universiti yang berteraskan Teknologi Maklumat.

- Pada masa yang sama, penekanan kepada keperluan pemahaman komputer, penyelidikan dan pembangunan di peringkat bawah seperti di sekolah menengah serta memfokuskan aspek kreativiti di sekolah rendah lagi. Selain itu suasana pembelajaran yang bebas dari unsur politik hendaklah diterapkan.

- Bilangan graduan dalam bidang Teknologi Maklumat yang berkualiti juga perlu ditingkatkan. Negara kita pada masa ini amat kekurangan para cendekiawan dan bijak pandai dalam bidang pembangunan manusia. Jika perlu, kita boleh mendapatkan bantuan tenaga pengajar dari negara-negara sahabat seperti India, Pakistan, Australia dan

Jepun bagi memberi latihan dalam bidang Teknologi Maklumat dan Pengurusan Sumber Manusia.

- Sebaik sahaja keadaan ekonomi menjadi lebih baik, pembangunan sosial perlu diutamakan sebagai program pembangunan kebangsaan. Walau bagaimanapun, tanpa mempunyai sistem politik yang baik dan sistem perundungan yang berkesan semua ini tidak akan dapat dicapai.

Peringkat Strategik.

- **Pilihan 1 - Langkah-langkah Kos Efektif.** Kita boleh membawa revolusi ini ke dalam sistem ketenteraan kita dengan membawa masuk sistem yang baru dan canggih serta teknologi terkini dari negara barat. Kita juga perlu memberi latihan kepada pertubuhan kita dengan OEM (Original Equipment Manufacturer) bagi penggunaan optimum.

- **Pilihan 2 - Pengeluaran Pelbagai.** Kita boleh melaksanakan pengeluaran pelbagai kelengkapan bagi memenuhi keperluan revolusi angkatan tentera kita. Ini bukan sahaja dapat mengurangkan tahap pergantungan kita kepada negara barat malah dapat menjana pertumbuhan ekonomi dengan mengeksport peralatan-peralatan ini nanti.

- **Pilihan3 - Kombinasi 1 dan 2.** Kita boleh mengimport sesetengah dari peralatan asas dari luar dan menjalankan penyelidikan dan pembangunan bagi menghasilkan produk kita sendiri. Ini merupakan satu pilihan yang amat baik kerana kita bukan sahaja meneroka kemampuan diri sendiri malah ia merupakan satu langkah kepada pembangunan negara sendiri.

Peringkat Taktikal.

- Pada ketika tertentu pergantungan kepada sumber luar terhadap teknologi dan doktrin adalah suatu kebaikan. Sesuatu negara itu akan memperoleh satu tahap kepakaran terhadap

konsep teknologi dan doktrin yang boleh dibangunkan di peringkat ATM khususnya dan Tentera Darat (TD) amnya.

- Tidak kira sebanyak mana sekalipun masa yang diperlukan, satu budaya pembelajaran bagi menghasilkan sikap inisiatif dan pemikiran kritikal perlu dipertingkatkan. Pelaburan dalam bidang ini adalah penting untuk melahirkan pemimpin yang dapat memahami selok-belok menetapkan keputusan yang tepat bagi sesuatu operasi, penerapan kepada unsur-unsur peperangan kepada semua anggota pasukan dan tahap kepekaan teknologi yang tinggi serta sedia menerima pendekatan-pendekatan baru yang boleh diimplementasikan dengan sebaik mungkin. Oleh itu, cadangan bagi mewujudkan kolej pegawai tentera seperti Akademi Tentera Malaysia (ATMA) perlulah diperbanyakkan dan dipertingkatkan dari masa ke semasa.

- Tambahan lagi, ketiga-tiga perkhidmatan mempunyai tahap budaya membaca dan penyelidikan yang kurang. Ini membuatkan sesuatu kerja yang dihasilkan berada di bawah tahap yang memuaskan. Usaha menggalakkan pegawai-pegawai untuk mencapai tahap pendidikan yang lebih tinggi akan membantu mereka meneroka potensi masing-masing.

- Tidak seperti angkatan tentera negara lain, kita tidak mempunyai kumpulan pemikir yang dapat menganalisis konsep dan doktrin yang terbaik. Kita perlu mewujudkan satu bahagian yang menjalankan kajian mengenai doktrin di setiap peringkat dan perkhidmatan yang mana ianya menggabungkan kepakaran pemikir tentera dan awam yang sedia ada.

- Angkatan tentera perlulah menyediakan dana bagi menggalakkan penulisan kertas kajian mengenai teknologi dan kesannya terhadap perang, kedua-duanya diterbitkan di media-media nasional bagi mewujudkan satu kesedaran. Pembentukan satu kumpulan pengkaji perlu dibentuk di ketiga-tiga perkhidmatan. Pendekatan ini boleh

diperluaskan lagi di peringkat universiti dan juga institusi kajian strategik bagi mengkaji setiap masalah yang wujud dari perspektif strategik. Kementerian Pertahanan (KEMENTAH) dan Markas ATM boleh juga mendapatkan pakar-pakar dari luar untuk memulakan kajian yang akan menjelaskan parameter, mengenal pasti kekurangan struktur dan memberi cadangan mengenai tahap pertahanan sendiri dalam konteks Revolusi Ehwal Tentera di negara ini.

- Sektor swasta perlu digalakkan menjalankan penerokaan dalam bidang pertahanan bagi kepentingan bersama.
- Semua idea di atas hanya akan bermakna apabila ianya diterjemahkan satu ‘action plan’ (rancangan tindakan) yang realistik bagi pemodenan angkatan tentera kita. Dengan mengikuti pilihan yang menuju ke arah Revolusi Ehwal Tentera, seperti peperangan maklumat

yang berkisarkan sekitar penggunaan teknologi dan peralatan yang tepat seharusnya menjadi fokus buat kita bagi melihat matlamat masa hadapan.

KESIMPULAN

Era baru Revolusi Ehwal Tentera semakin hampir. Oleh yang demikian, pemahaman terhadap Revolusi Ehwal Tentera ini amatlah penting. Perubahan teknologi merupakan revolusi kepada peperangan di masa hadapan. Negara yang dapat meneroka teknologi baru ini akan mempunyai kelebihan dari segi inovasi doktrin dan organisasinya yang mana ianya dapat mengecap kebaikan dan kepentingannya. Peranan kita sebagai pemimpin tentera pada masa kini amatlah getir dalam mendahului atau sekurang-kurangnya menyamai kebolehan musuh kita bagi menghadapi peperangan pada masa hadapan.

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Kapt Saiful Nizam bin Che Soh telah ditauliahkan pada 4 Ogos 1993 ke dalam Kor Artilleri Diraja, pernah menjawat beberapa jawatan penting di pasukan. Beliau terlatih di dalam artilleri Pertahanan Udara (PU) dan telah menghadiri kursus 'Long Gunnery Staff Course' di Pakistan. Beliau kini bertugas sebagai Jurulatih Kanan Cawangan PU di PUSARTI.

THE CHANGING FOCUS OF SECURITY: FROM NATIONAL SECURITY TO HUMAN SECURITY

— By : Lt Kol Abd Rahman bin Alavi —

INTRODUCTION

The evolution of the concept of security in the global scenario is being influenced by changes in the environment. This could be clearly seen in the changes of the nature of security during the cold war and the post cold war era. In the post cold war era, the emergence of new civil conflicts, large-scale atrocities and even genocide are incremental in rate. The evergreen Israeli-Palestinian conflict, the Gulf War, ethnic cleansing in the Balkans, the war against terror in Afghanistan and genocide in Rwanda are a few examples of war and conflict that may be justified in one's perception despite inhumane and brutal acts against civilian population. As globalisation takes shape in the post cold war era, it is strongly believed that it will drag along significant increment in violent crimes, drug trades, transnational terrorism, diseases, environmental degradation, and many other aspects of human life.

The civilian population has been the victim of the circumstances; they were not protected, neither were they secured against these acts. This does not conform to the belief that, when states are secure, people are secure.¹ The point is how much security can be assured to protect the people from these brutal acts? In simple terms, being in the post cold war era and with the rise of new challenges to state and non-state actors, it is important to give due consideration to new threats to security – the **human security**. These contemporary security concerns the enduring problems of ethnic violence, peacekeeping, environmental degradation,

transnational terrorism and inter-state conflicts, are now at the forefront of potential and existing threats.

The subject of this paper is to analyse the changing focus of security in the international system from traditional national security to contemporary human security. The paper begins with defining certain terms to allow a common understanding of the terms before dwelling further on the subject. It will then give a general overview on the concept of security in the cold war era and the changing focus of security in the post cold war era. It will then argue the relevancy and concern of human security in the post cold war era and the role of international organizations in institutionalising human security. This paper will conclude to determine the relevancy and projection of human security in a state's foreign policy.

DEFINITION

National Security

Abdul Monem Al-Mashat (1985) defined national security with regards to Third World as the capacity of a society to protect individuals, groups, and the nation from physical and socio-economic dangers and from the threat of such dangers created by both systemic and attributional conditions.² Caroline Thomas (1992), viewed it as "pursuing national interest above all else and not engaging in extensive cooperation unless motivated by self-interest."³ Arnold Wolfers (1962), on a similar basis defined national security as "protection of values

¹ Canadian Department of Foreign Affairs and International Trade, "Human Security: Safety for People in a Changing World", web site <http://www.summit-americas.org/Canada?HumanSecurity-english.htm> visited on 23 March 2002, p.3.

² Abdul Monem M.Al-Mashat, "National Security in the Third World," Westview Press, Colorado, 1985 p.xvii.

³ Caroline Thomas, "Third World Security," in Roger Carey and Trevor C. Salmon (eds), "International Security in the Modern World", St. Martin Press, New York, 1992, p.93-94.

previously acquired.⁴ Wolfer's views that the absence of fears in that the values will be attacked, states would assure security to protect the values.

According to Dr. Mahathir Mohammed (1994), Malaysia's former Prime Minister, national security is inseparable from political stability, economic success, and social harmony. Economic difficulties are a serious threat to national security. Failure to understand this threat may result in a cycle of recession followed by political instability, security threats, and even greater recession. The skilful management of the economy and clear thinking are therefore an integral part of the strategy for national security. Political stability is the sine qua non of national security.⁵

Reinforcing Dr. Mahathir's view, Kruse and Nye in Abdul Monem (1985), stressed that the economic security is the "absence of threat of severe deprivation of economic welfare." Protecting economic welfare conceptually means to secure national value and interest, which is part of national security. There seems to be a close relation between economics and security. One obvious dimension is the connection between military spending and economic performance. The economic stability will apparently nurture the defence spending.⁶ State allocate and spend large percentage of their GNP for defence expenditure in order to build a credible armed forces to safeguard not only their sovereignty but also their national economic interest. Economy as a variable plays a vital factor and is the basis of national power.⁷

Human Security

The United Nations Development Program interpretation of human security as "human security can be said to have two main aspects, first, safety

from such chronic threats as hunger, disease and repression. The second, it means protection from sudden and hurtful disruptions in the pattern of daily life- whether in homes, in jobs or in communities."⁸ On a parallel understanding the Government of Japan defines it as, "comprehensively covers all the measures that threaten human survival, daily life, and dignity – such as environmental degradation, violation of human rights, transnational organized crimes, illicit drugs, refugees, poverty, anti-personnel landmines and... infectious diseases such as AIDS – and strengthen efforts to confront these threats".⁹ On a similar basis, the Canadian Government restricts the definition of human security as "safety for people from both violent and non-violent threats. It is a condition or state of being characterized by freedom from perceived threats to people's rights, safety or lives"¹⁰. Lloyd Axworthy (1997), the former Canadian Foreign Minister pursued this definition by reiterating that the safety include from physical threats, the achievement of an acceptable quality of life, a guarantee of fundamental human rights, the rule of law, good governance, social equity, protection of civilians in conflict, and sustainable development.¹¹

Comparatively, all the definitions suggest that human security should be approached from a different perspective. Rather than looking at security from a military perspective, it should be addressed from the humanitarian view. In broader terms, human security shifts the focus from traditional territorial security to that of the people. Human security is just taking necessary preventive measures to reduce the vulnerability, minimizing the risk, and taking essential remedial measures if prevention fails. It recognizes individual's personal protection, preservation, welfare, and quality life, which are supposed to be provided by the state. Human security attends to the issues of unstructured violence or threats¹² that is, the unstructured dam

⁴ See Arnold Wolfers, "Discord and Collaboration," John Hopkins University Press, Baltimore, 1962, p.25.

⁵ Govin Alagasari, "Mahathir: The Awakening", Uni-Strength, Kuala Lumpur, 1994, p.70.

⁶ See P.C.Frederiksen, "The Relationship Between Defense Spending and Economic Growth". Some Evidence for Indonesia, 1964-85 , Contemporary Southeast Asia, Vol.10 No.4, 1989, pp.375-382.

⁷ See Hans Morgenthau, "Politics Among Nations: The Struggle for Power and Peace", fifth edition (Scientific Book Agency, Calcutta, 1973, pp.112-120. Morgenthau grouped elements of national power into those, which are relatively stable, and those subject to constant change. Elements made of natural resources and industrial capability of a state constituted the economic capability.

⁸ United Nations Development Program, "1994 Human Development Report," Oxford University Press, New York, 1994, p.22.

⁹ Japanese Ministry of Foreign Affairs, "Diplomatic Blue Book 1999", Chap.3 sect.2.web site <http://www.mofa.go.jp> visited on 23 March 2002.

¹⁰ Canadian Department of Foreign Affairs and International Trade, "Human Security: Safety for People in a Changing World", web site <http://www.summit-americas.org/Canada?HumanSecurity-english.htm> visited on 23 March 2002, p.3.

¹¹ Lloyd Axworthy, "Canada and Human Security: The Need for Leadership", International Journal, Vol.52, No.2, p.185.

¹² George Maclean, "Instituting and Projecting Human Security: A Canadian Perspective", Australian Journal of International Affairs, Vol.54, No.3, 2000, p.270.

ages incurred on the civil population. Unlike military violence, which are structured against military personnel in a war situation.

SECURITY IN THE POST COLD WAR ERA

The Concept of Security in the Cold War

The major concern of security during the Cold War was how to prevent war in terms of national security. Efforts were taken to deter the aggressor from attacking and the principles of deterrence were implemented to avoid war. Armed race was one phenomenon in ensuring that the adversary was not in an advantageous position to threaten the sovereignty of others. Nuclear weapons and capabilities were the ultimate deterrence. Where conflicts are unavoidable, proxy wars were the trend. Security in the traditional concept means 'immunity' (to varying degree) of a state to threats emanating outside its boundary.¹³ Thus, the principal objective of national security in the cold war era is the protection of territorial integrity and the political sovereignty of the state from external aggression. In this era, the international system practices a bipolar world.

Redefining Security in the Post Cold War Era

The end of cold war had brought the superpower rivalry to an end; the major concern was to redefine '**national security**'. Large-scale conflicts or wars became obsolete and the birth of the Revolution in Military Affairs (RMA) and the introduction of smart weapons changed the role of the military from its traditional functions. Clausewitz's famous dictum that 'war should be viewed as policy by other means' was meant to imply that military force should be understood in the context of the purpose it serves.¹⁴ The preoccupation of policy-makers with security in the military sense had gradually given way to a more comprehensive concept that takes into account non-military threats. In this sense Barry Buzan (1991) viewed security as:

"The pursuit of freedom from threat. ... in the context of the international system, security is about the ability of states and societies to maintain their independent identity and their functional integrity"¹⁵

In the post cold war era, we see the rise of dominant individual actors, the end of the state-system and the focus on individual actors, and the role of International Organizations. There are new security issues to address and human security is one 'new' area that has increasingly been perceived as a security issue by the international community and treated as being threatened. It reflects that it is not only changing threat perceptions and attitudes towards the nature of security but also it changes the whole concept and focus of security. The concept of security has been broadened and deepened in view of the changing focus of security. It has been broadened in the sense that it has included non-military threats, such as environmental degradation, disease, overpopulation, mass refugee movement, nationalism, terrorism and nuclear catastrophe.¹⁶ By deepening the concept, it considers the security of individuals and groups¹⁷ – human security.

Nevertheless, it is argued that only advanced and developed states are capable of providing the required level of security to its people. This is because these states have owned the required political, technological, and military power to ensure human security. How much capability do Third World countries possess to guarantee protection to its people? This is one dilemma faced by Third World or developing countries. They find difficulties in devising their own security for their own people. It is in fact not only the nature of Third World countries which are weak states in their inability to provide security, even the most advanced states like the United States have also failed in this very sense. The September 11 incident, which has claimed thousands of lives, is argued as the failure of the American foreign policy and its traditional security concept.

It is also argued that in the clash of the security paradigm, the central place of the nation-state as

13 Mohammed Ayoob, "Security in the Third World: the worm about to turn?" *Journal of International Affairs*, Vol.60 No.1, 1984, p.41.

14 David Baldwin, "Security Studies and the End of the Cold War," *World Politics*, Vol.48, October 1995, p.130.

15 Barry Buzan, "People, States & Fear: An Agenda for International Security Studies in the Postcold War Era", harvester Wheatsheaf, London, 1991. p.18.

16 Jessica Tuchman Mathews, "Redefining Security," *International Security*, Vol.8, No.1, summer, 1983, pp.129-153.

17 Roland Paris, "Human Security: Paradigm Shift or Hot Air?" *International Studies*, Vol.26, Issue No.2, 2001, p.97.

the focus of security policy is increasingly being challenged. In the cold war era, security was focused on the state as the unit of analysis. This has been increasingly challenged since the international community has been involved in security matters, which includes human rights, economic sanctions, drug trafficking, AIDS and many others that affect individual, society and state globally. While redefining security in the post cold war era, it is vital to restructure the level of analysis to include the three levels rather focusing only on state level. It will be more applicable in analysing human security matters.

INSTITUTIONALIZING HUMAN SECURITY

Elements of Human Security

UNDP's 1994 Human Development Report identified seven specific elements that comprise human security. These elements are: (1) **economic security** – freedom from poverty; (2) **food security** – access to food; (3) **health security** – access to health care and protection from diseases; (4) **environmental security** – protection from such dangers as environmental pollution and depletion; (5) **personal security** – physical security from such thing as torture, war, criminal attacks, domestic violence, drug abuse, suicide, and even traffic accidents; (6) **community security** – survival of traditional cultures and ethnic groups as well as the physical security of these groups; and (7) **political security** – enjoyment of civil and political rights, and freedom from political oppression.¹⁸

Barry Buzan (1991) categorized these human security elements into five dimensions of security. However, Buzan discussed them in terms of international security, which embraces military, political, economical, societal, and environmental dimensions.¹⁹ He went further in explaining the five dimensions:

Military security concerns the two-level interplay of the armed offensive and defensive capabilities of states, and states' perceptions of each other's intentions. **Political security** concerns the organizational stability of states, system of government, and the ideologies that give them legitimacy. **Economic security** concerns access to the resources, finance, and markets necessary to sustain acceptable levels of welfare and state power. **Societal security** concerns the sustainability, within acceptable conditions for evolution of traditional patterns of language, culture, and both religious and national identity and custom. **Environmental security** concerns the maintenance of the planetary biosphere as the essential support system on which all other human enterprises depend."²⁰

Human security involves the security of individuals in their personal surroundings, their community, and environment. Basically, it involves the three levels of analysis – individual, the state, and international level. Human security is not merely to 'redefine' security per se, but it related in seeking to guarantee or guarding against deprivation felt by the individual or the community. Ken Booth (1991) views human security as the idea of emancipation. Emancipation is the sense that freeing of people from those physical and human constraints which stop them carrying out what they would freely choose to do. War, threat of war, poverty, poor education, and political oppression are some examples. Emancipation basically means security.²¹

Human as Referent

As human security is very much related to traditional security as a function of the conventional objectives of state, it integrates new issues into the traditional concept, basically blending the realist school of thought with the critical security studies approach²² led by Ken Booth. The focus is to make

20 Ibid., p.35.

21 Ken Booth, "Security and Emancipation," Review of International Studies, Vol. 17, 1991, p.319.

22 Keith Krause and Michael C. Williams, "From Strategy to Security: Foundation of Critical Security Studies", in Keith Krause and Michael C. William (eds.), "Critical Security Studies," University Press, Minnesota, 1997. This study worked to identify the roles of strategic studies in the post cold-war era. It developed the idea of emancipation and focusing security on individual. It encompasses the interest of the people rather than just states.

18 See UNDP 1994 Human Development Report, p.24. These elements are also cited in Roland Paris, p.90.

19 Barry Buzan, "Is International Security Possible", in Ken Booth [edited] "New Thinking About Strategy and International Security", Happer Collin, London, 1991, p.34.

humans as referent as regards to the nation-state. However, the state is not eliminated from this relationship. The burden of responsibility still lies in the state. Therefore, the purpose of security in a nutshell, is to defend the integrity and sovereignty of state and the human security of its individual citizen.

It is argued that the level of analysis in human security should not be restricted at state level alone. One of the reasons why human security does not 'fit' easily into the traditional notion of security concerns is that many human security matters are thought as within the realm of domestic, and not international responsibility. Human security must be looked at from a holistic view. Contemporary responses to human security encompass the interest of the state, transnational actors, and the international community as a whole. The Gulf war, Kosovo, and the Balkans interventions are few classic examples of human security problems that concern the international community.

Enhancing Human Security

Strengthening Legal Norms and Enforcement. Two fundamental strategies in enhancing human security are strengthening the legal norms and building the capacity for enforcing them. These legal norms are; restriction in illegal transfer or smuggling of small arms, banning of the recruitment of children soldiers, prohibiting child labour, application of legal standards to non-state actors and reducing violence in armed conflict. Building the capacity to enforce them in order to effect and promote sustainable development must support these legal norms. Individual states' domestic and foreign policies should integrate these legal norms and enforcement towards achieving human security.

International Court of Justice (ICJ). The initiative taken to enhance human security by creating an ICJ has demonstrated the potential of an ethnocentric approach to security. The ICJ establishes a mechanism to hold individuals accountable for war crimes, like those which had been established in Tokyo after World War II and the latest is the trial of Milosevic for his war crimes in the Balkans. This effort holds the promise of preventing future abuse of people by states or groups in any armed conflict. This initiative has been working well

through the United Nation's positive efforts. Individual states have to comply with the terms and regulations to uphold the integrity of the ICJ.

Ban of Anti-Personnel Landmines. Another measure to enhance human security and people-centred security approach is the campaign to ban the use of anti-personnel landmines. The use of these landmines is a clear example of threat to the environmental security of the people. The threat offers more to the civilians in the post-war administration. While it contributes marginally to the security of states, mines have a devastating impact on civilians attempting to rebuild their lives in war-torn societies. Many members of the United Nations have not committed to this ban for their own self-interest. States must allow their commitment in their foreign and defence policies in order to enhance human security.

Environmental degradation. Elevating environmental degradation to a security problem is something that remains in dispute.²³ However, there are three different senses in which, environment might be included in the notions of security: First, environmental problems could be caused by war, such as a small scale nuclear war which could cause a climatic and ecological disaster, and may affect the entire globe. Secondly, war might accrue from environmental problems over scarce water since some states might be sharing water from the same river.²⁴ Arguments over scarce resources such as water are a constant source of irritation in many parts of the world and could be expected to intensify if population pressures continued to grow.²⁵ Thirdly, environmental problems might constitute a direct security threat as in extreme cases; the physical basis of a state could be in jeopardy by nature. For instance, states like Bangladesh and the Netherlands would almost disappear in case of severe global flooding.²⁶ States and international coordinating forums must take necessary actions to protect the continued degradation and threat to humans.

²³ Bjorn Moller, "National, Societal and Human Security," UNESCO, Paris, 27-28 November 2000, p.31.

²⁴ Peter Gleick, "Water and Conflict: Fresh Water Resources and International Security", International Security, Vol. 18, No. 1, summer, 1993, pp. 79-112.

²⁵ Lawrence Freedman, "International Security: Changing Targets", Foreign Policy, Spring, 1998, p.53.

²⁶ Bjorn Moller, p.32.

²⁷ Stephen Walt, "The Renaissance of Security Studies", International Studies Quarterly, Vol.35,1991, p.212.

CONCLUSION

The traditional concept of security reliance on the realist school of thought has developed over the years beyond its traditional concern of "threat, use and control of military force" primarily by states.²⁷ The search for security is therefore, primarily a matter of deterring and defending against foreign intrusion. The ultimate goal is the absence of military threat as well as the freedom from fear. So, in the post cold war, security needs to be addressed on a comprehensive approach. It is not only international economic interdependence between states, but also the horizontal and vertical extensions of a larger security problem, which includes the elements of human security.

Several initiatives and strategies have been implemented to promote human security at the international level. However, not all states conform to these initiatives and strategies. For example, Singapore did not subscribe to the ban on anti-personnel landmines. Efforts to institutionalise

human security should be undertaken by states by adopting and promoting it as a functional part of their foreign policy. Security policies integrated with human rights, democracy, and other comprehensive economic policies would form the basis of the human security approach in any foreign policy. Apart from that, humans should be made the reference point in security studies to gain impact on foreign policy, and this is the changing security concept in comparison to the neorealist concept that the primary reference for security has been the state.

In conclusion, human security is a relevant concept in the security studies, especially in the post cold-war era. This is more so, with the evolution of the security scenario since World War II. The concept of security has evolved through time from state-centric in the cold-war period to ethnocentric in the post cold-war era. Promoting human security requires effective coordination of initiatives and strategies at domestic and international levels, together with a lead role played by international organizations like the United Nations.

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Lt Kol Abd Rahman bin Alavi was commissioned into the Royal Ranger Regiment in 1977. He attended Infantry Officer Advanced Course in Fort Benning, Georgia, USA in 1987 and graduated from the Malaysian Armed Forces Staff College in 1991. He had served with United Nations Operation in Mozambique (ONUMOZ) in 1994 – 1995 and promoted to the present rank in 1997 and commanded 303rd Infantry Battalion in Pengkalan Hulu, Perak. He was graduated from the Armed Forces Defence College in 2002 and earned a Master Degree in Defence Studies from UKM. He was involved in International Monitoring Team in Mindanao in 2004 and currently employed as SO 1 Operation in Defence Operation Room, MAF HQ.

THE NEW DEVELOPMENT IN NUCLEAR STRATEGY. THE STRATEGY WE SHOULD KNOW

— By : Mej Mohd Hanim bin Saip —

INTRODUCTION

Robert Oppenheimer was a principal scientist in the effort to create the atomic bomb. He was the project director and also a theoretical physicist under the Manhattan Project, at Los Alamos, New Mexico. Hundreds of scientists and engineers were recruited to solve the problems of manufacturing an effective nuclear device. After three years and two billion dollars, the Los Alamos group succeeded in harnessing nuclear energy for military purposes. On July 16, 1945, at Alamogordo, New Mexico, the first nuclear weapon was detonated. Labelled 'Trinity' by Oppenheimer, the test exceeded expectations.¹ Just three weeks after the first test, a second atomic bomb was exploded, this time over the city of Hiroshima. On August 6, 1945, Hiroshima became death. Three days later, on August 9, 1945, Nagasaki became death. This was the period where humanity took a long step on the road to its own demise. The starker reality about nuclear weapons is the massive destruction, which they cause. The picture, which comes before the eyes is that of the grisly death and destruction caused in both Hiroshima and Nagasaki, where at least 106,000 people died almost immediately from the explosion and the fire storms that followed.²

Nuclear weapons, the weapons of mass destruction are powered by atomic, rather than chemical processes. Nuclear weapons produce large explosions and hazardous radioactive by products by means of either nuclear fission or nuclear fusion.

Nuclear weapons can be delivered by artillery, planes, ships, or launched as inter continental ballistic missiles (ICBM); some can also fit inside a suitcase. Tactical nuclear weapons can have the explosive power of a fraction of a kiloton (one kiloton equals 1,000 tons of TNT), while strategic nuclear weapons can produce thousands of kilotons of explosive force. After World War II, the proliferation of nuclear weapons became an increasing cause of concern throughout the world. At the end of the 20th century, the vast majority of such weapons were held by the United States and the USSR.

Although nuclear weapons have been detonated on adversaries only twice i.e. on two places in Japan during World War II, states have continued to pursue their development for a wide range of reasons. Among others; as a deterrent to attack by others, in the hope that they will never actually be used in combat; as an instrument of diplomatic influence, where the mere threat of their use is assumed to confer certain advantages on their possessor; or purely for prestige, and recognition as a regional or global power of the first order. Some analysts credit the existence of a nuclear "balance of terror" for having prevented an outbreak of hostilities between the superpowers in the Cold War. However, most consider the spread of nuclear weapons capabilities in general, and in particular to less stable or conflict-ridden regions of the world, to be harmful to international security by increasing the likelihood of nuclear weapons being used often in wartime; imposing heavy costs on states preparing for such an eventuality; and potentially increasing immeasurably the suffering to be incurred in future conflicts.

¹ Peter R. Beckman, Larry Campbell & Others, *The Nuclear Predicament – An Introduction*, Prentice-Hall, New Jersey, 1989, p. 8.

² Freedman Lawrence, *The Evolution of Nuclear Strategy*, Second Edition, New York: St Martin's Press in association with the International Institute for Strategic Studies (IISS), 1993, pp. xv.

The Aim of the Paper

The central theme of this paper is to discuss the new development in nuclear strategy. It begins by explaining the concept of nuclear policy and may then proceed to discuss the development of nuclear strategy with the focus on the United States (US) and the Soviet Union (Soviet) as the two major nuclear power in the world. At the end of the paper the current development and other countries that involved in nuclear strategy will also be discussed.

BASIC CONCEPT OF NUCLEAR POLICY

The true development of nuclear strategy started in the early 1950s between the Soviet and the US, which later contributed to the nuclear arms race. On the US side, there were two crucial decisions i.e. to maintain nuclear superiority and to resort limited nuclear strike options. On the Soviet side, there was a similar crucial decision i.e. the development of nuclear counter force and the development for war fighting, new strategy and the goal for mass destruction of the opposition military capabilities and the military to resist.³

The main aim of establishing a nuclear strategy by these two big country is to show the nature of force and its roles in foreign policy. This concept has a dual character, which can be used to defend values as well as to destroy them. The second concept of this strategy is as a tool of foreign policy and the nature of deterrence. During this early period, both countries have developed so many nuclear programmes in order to compete amongst themselves and to show their power to the rest of the world. Nuclear weapons may be used in a variety of ways. Thus, the concepts that have been identified and used are as follows:

u The Concept of First and Second Strike.

This first strike concept is a disarming attack on the enemy and second strike is the concept where the weapons are used for retaliation following a nuclear attack by another state. It is followed by counter force targeting where the weapons are aimed at the military forces of the other side, particularly at strategic or nuclear

force theater and counter value targeting targeting where they are aimed at soft urban, industrial and economic targets. It also referred as counter city or counter people targeting.⁴

u The Concept of Deterrence. This concept requires a wide range of weapons to prepare different eventualities. It is linked with the strategies and doctrine flexible of require or ability to destroy military as well as urban industrial targets and differs fundamentally from the concept of embodied in the idea of massive retaliation.⁵

THE DEVELOPMENT

The Era of United States Atomic Monopoly (1940s)

After the bombing of Hiroshima and Nagasaki, no other state except the US had the ability in producing nuclear weapons. This was the era where assured destruction US had a monopoly on nuclear weapons till 1949. This contributed to the US strategy of "Assured Destruction" by strategic bombardment during this period as towards Hiroshima and Nagasaki. This was the era where strategy or one sided capability took place. With this strategy, the state is capable in using nuclear weapons at will in ensuring the destruction of adversaries without retaliation. Only the US had this capability and assured destruction was the declaratory nuclear strategy of the US for about a decade. It is devoted to the prevention of nuclear war or any major aggression rather than its conduct. The plans made in 1947, placed heavy emphasis on an atomic air offensive.⁶ The weapons at this stage were under the Atomic Energy Commission (AEC) and kept in a partially assembled condition because they could be deployed at will.

On the other hand, the Soviet strategy during this period was developed with the experiences of the Great War and the realisation that the US held

⁴ Greville Rumble, *The Politics of Nuclear Defence – A Comprehensive Introduction*, Polity Press, Oxford, 1985, p. 42.

⁵ Ibid.

⁶ Rosenberg David Alan, *The Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960*, Steven E Miller (ed.), *Strategy and Nuclear Deterrence*, Princeton, New Jersey: Princeton University Press, 1984, p. 122.

³ Haley, Keithly, Merritt, *Nuclear Strategy, Arms Control and The Future*, Westview Press/Boulder And London, 1985 p. 2.

the upper hand in the nuclear era. Therefore, the Soviet military strategy during this period was one of averting war as stated by Marshal NV Ogarkov in 'Military Strategy'.⁷ The Soviet during this era chose not to utilise their conventional superiority as reflected in their backing down during the Berlin crisis in 1948.

The Era of the United States' Dominance (1950s)

The American nuclear monopoly was broken with the Soviet nuclear test in August 1949. The British also developed the atomic bomb independently in 1952. The weakness of the American conventional forces necessitated the US to respond by raising the stakes, moving to the development of the hydrogen bombs, and thereby ushering an era of nuclear plenty.⁸ This was also the era when the Soviet was working to build up its nuclear capability. During this time, the Americans were relying on their long-range bombers well as primary means of delivery and developed a whole of tactical nuclear weapons. The Soviet was developing its long-range bombers as well as the Inter-Continental Ballistic Missiles (ICBMs) during this time. The ICBMs were first tested by the Soviet Union in 1956. In 1957, Soviet launched the SPUTNIK (artificial earth satellite) to enhance its ICBM capability. During this period, the US under the administration of President Eisenhower shifted to the strategy of and one-sided nuclear capability. A contributory factor to the new strategy was the development of a range of nuclear capabilities – from strategic to tactical. A basic decision was made to 'depend primarily upon a great capacity to retaliate, instantly, by means and at places of our own choosing'.⁹ The second element of the strategy was for defence against local aggression, by not only 'massive retaliatory striking power' but also tactical nuclear weapons.¹⁰ The third element in the strategy was the building up of the capability of defence against nuclear attack.

The growing Soviet nuclear capability reaffirmed the strategy of massive retaliation. The build up of the nuclear stockpile continued in achieving this aim.

The targeting during this time reinforced the doctrine of The development of ballistic missiles complicated the problems. The approach during this time to protect the bomber force was not to increase their survivability on the ground, but to ensure that they would be in the air by the time any surprise attack arrived.¹¹ This led to the development of early warning systems and the transfer of the atomic weapons from the AEC to the military and their subsequent deployment.

The Soviets during this time continued with the strategy of averting major war while they went about steadily building up their nuclear capability and the means of effective delivery. The Soviets followed a nuclear strategy of deterrence. The Korean War, in 1950, demonstrated that, 'in a period when the world's two greatest powers were nervous about getting into an all-out war with each other, any conflict would be subjected to major political constraints'.¹² This era also witnessed the British initial use of the nuclear threat as a deterrent to the Soviet conventional forces in the European theatre. The British nuclear delivery capability improved in 1956 with the operation of the V Bomber force. The British government reaffirmed its commitment to a policy massive retaliation in 1957.¹³

The Era of Nuclear Parity and the United States Preponderance (1960s)

This era was characterised by rapid advancement in missile technology. This was the era of testing and refinement of Soviet ICBMs and the development of Minuteman ICBMs and Submarine-Launched Ballistic Missiles (SLBMs) by the United States. This period saw the introduction of the strategy of mutual assured destruction (MAD), damage limitation and flexible response. An assured destruction capability was defined as the ability to deter a deliberate nuclear attack upon the US or its allies by maintaining at all times a clear and unmistakable ability to inflict an unacceptable degree of damage upon any aggressor, or combination of aggressors even after absorbing a surprise first

⁷ Marshal NV Ogarkov, *Military Strategy*, Haley P Edward & Merritt Jack (eds.), *Nuclear Strategy, Arms Control and the Future* (Second Edition), Boulder, Colorado: Westview Press, 1988, p. 167.

⁸ Freedman, op. cit., p. 63.

⁹ Freedman, op. cit., p. 85.

¹⁰ Rosenberg David Alan, op. cit., p. 139.

¹¹ Ibid, p. 158.

¹² Freedman, op. cit., p. 72.

¹³ Ibid, p. 310.

¹⁴ Lawrence Freedman, *The Evolution of Nuclear Strategy*, Macmillan Press Ltd, 1985, p. 246.

¹⁵ Haley P Edward, op. cit., p. 10.

strike.¹⁴ The strategy of finite deterrence was promulgated in 1959 with the development of the Polaris sea-based Intermediate-Range Ballistic Missile (IRBM) project which was fast bearing fruit. This gave the US a second strike capability relatively immune from detection and destruction by the enemy. The Single Integrated Operational Plan (SIOP) was prepared in late 1960 and along with the National Strategic Targeting List (NSTL) was the beginning of overkill. The strategy of assured destruction was used to emphasise the total destruction, which will be the result of a nuclear war. This implied a capability to destroy 20 to 33 percent of the Soviet population and 50 to 75 percent of industrial capacity. The American capabilities would at all times be maintained above this level during this period.

The strategy of flexible response came about to reduce the reliance on nuclear weapons. The goal of was 'to escape the dilemma-paralysis or catastrophe-caused by the growth in the Soviet ability to devastate the United States'.¹⁵ This was accomplished by raising the nuclear threshold by hardening the nuclear weapons and by increasing the conventional forces in order to make self-defence possible without immediate resort to the use of tactical nuclear weapons.

On the other hand, the launch of the world's first artificial earth satellite, 'SPUTNIK', by the Soviet Union on 4 Oct 1957 dramatically illustrated the advancement in the Soviet technology. The Soviet had earlier tested the ICBM and was developing its long-range bomber fleet. The Soviet nuclear forces steadily increased and it came to rely on the element of surprise in dealing the first blow to be able to survive a nuclear exchange. Thus, the Soviet theorists moved towards a theory of pre-emptive attack to fight and win a nuclear war.¹⁶ Marshal Sokolovsky emphasized the crucial importance of the initial moments of war in 'The Nature of Modern War' published in 1962:¹⁷

"To achieve the most decisive results in the shortest time in a future world war, the Soviet Armed Forces and those of the entire

socialist camp will have to employ their main military forces from the very outset of the war, literally during the very first hours and minutes. This is a strategic requirement..."

The other policy followed during this period was one of There was more reliance placed on deterrence caused by nuclear power and the means of delivery available to the Soviet Union.¹⁸

On the British side, a 'special relationship' with the United States which was further bolstered by the amendment to the US McMahon Act in 1958. It was especially dependent on the US in the area of delivery vehicles. This was evident from the willingness of the US to supply 'Sky Bolt' air launched missiles to Britain in return for a nuclear submarine base at Holy Loch in 1960. The US supplied Britain with the Polaris SLBM in 1962 after the 'Sky Bolt' project was scrapped. The British Polaris force was used in NATO with targeting provided by the US. However, the force was maintained independently to create a 'second decision centre' as an insurance against Soviet aggression in Europe in the belief that the US would not act unless America herself were attacked.¹⁹

This period also saw the involvement of France in a nuclear program. The French nuclear programme was a means by which France wanted to regain her status amongst the nations. It was also not convinced with the reliability of the US nuclear guarantees for the defence of Europe and considered it inferior to national effort. President Charles de Gaulle utilised the concept of French Force de frappe- proportional deterrence as a central instrument of his diplomacy. He believed that nuclear weapons were the main source of contemporary international power and influence.²⁰

The Era of the Strategic Defence Initiative Program (1970s)

This was an era of unbridled arms race between the Soviet and the US. As the capabilities matched the Soviet adopted the strategy of mutual assured destruction as illustrated by the statement made by

¹⁶ Freedman, op. cit, p. 150.

¹⁷ Marshal VD Sokolovsky, The Nature of Modern War, Haley P Edward & Merritt Jack (eds.) Nuclear Strategy, Arms Control and the Future (Second Edition), Boulder, Colorado: Westview Press, 1988, p. 160.

¹⁸ Freedman, op. cit, p. 262.

¹⁹ Ibid, p. 312.

²⁰ Ibid, pp 321.

the Soviet delegation during the SALT negotiations in Nov 1969 where they agreed that “war between our countries would be disastrous for both sides, and it would be tantamount to suicide for the ones who decided to start such a war”.²¹ Strategic Defence Initiative (SDI) is adopted by USSR with the ability to construct Multiple Independent Retangetable Vehicle (MIRV). This MIRV is able to carry numbers of warhead. At the same time the US were producing more warhead missiles and by 1977 the USSR produced numbers of multiple warhead. The US on the other hand, adopted the strategy of *flexible response* (1962 – 1973) under the administration of President John F Kennedy and Lyndon B. Johnson from *massive retaliation* or MAD. The goal of this strategy was to escape the dilemma of paralysis or catastrophe. The strategy make US weapon invulnerable by putting them in silos and submarines and increases US and NATO conventional forces in order to make self defence possible without having to resort immediately to nuclear weapon in case of war.

The Era of the Ballistic Missile Defence Program (1980s)

The US under President Reagan in Mac 1983 announced it's interest in Ballistic Missile Defence (BMD) also known as Star Wars.²² In a speech broadcast live from the Oval Office of the White House on March 23, 1983, President Reagan surprised most of the country and some of his own advisors with these closing words;

“Let us share with you a vision of the future which offers hope. It is that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive....what if free people would live secure in the knowledge that their security did not rest upon the threat of instant US retaliation to deter a Soviet attack, that we would intercept and destroy strategic ballistic missile before they reached our own soil or that of our allies.... I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace, to give us the means of rendering these nuclear weapons impotent and obsolete”.²³

This is the development of a space-based anti-ballistic missile system as another way of closing the ‘window of vulnerability’, which faced US ICBMs and other strategic systems. The system provides a ‘layered’ defence involving firstly the early identification of a missile launch through early warning satellites, ground based early warning radar, and other sensors, and the use of high-energy laser beams to ‘thin out’ Soviet ICBMs as they rise from their silos. In the second layer, space-based and land-based lasers operating through large earth-orbiting mirrors to be launched on warning of an attack would deflect the beams onto incoming warheads. A sounding rocket equipped with optical sensors to locate and track the warheads would meanwhile be launched. This would transmit data on the warheads’ trajectories to interceptor rockets, which would rise to attack the incoming warheads in mid-flight. Finally, in the third layer of defence, point defence systems would locate and try to destroy surviving warheads at low altitude as they close in on their targets.²⁴

The Era of the National Missile Defence & Theatre Missile Defence Program (1990s)

This is the era on which this program was proposed to be deployed when the US is under the administration of President Clinton. The National Missile Defence (NMD) program is designed to defend all the 50 American states, which was not a priority but merely a subject of technological research and development. This was because the threat of ballistic missile from rogue states to the US mainland was deemed not imminent. The NMD is a ballistic missile defence that defends whole US territory by intercepting long-range ballistic missiles that can reach the US mainland and Hawaii.²⁵

At the same time Theatre Missile Defence (TMD) programs pursued by the Clinton administration were composed of several systems that can be differentiated by the intercept altitude of ballistic and cruise missiles and the means of deployment. Classification by intercept altitudes gave two systems; lower-tier defence system to intercept missile within the atmosphere (at an altitude of about

²¹ Ibid, p. 270.

²² Peter R. Beckman, op. cit, p. 175.

²³ Ibid, p. 240.

²⁴ Greville Rumble, op. cit, p. 37.

²⁵ Ogawa Shinichi, *Missile Defence and Deterrence*, National Institute for Defence Studies Report, No 3 March 2002, p. 25.

100 kilometres or less) and upper-tier defence systems to intercept ballistic missile in the high atmosphere or outside the atmosphere (at an altitude of about 100 kilometres or more). In terms of deployment patterns, there were both land and sea-based systems. Lower-tier TMD systems consisted of the land-based Patriot Advanced Capability – 3 (PAC-3) and the sea-based Navy Area Defence (NAD) systems, both aimed at shooting down ballistic and cruise missiles that possess a range of less than about 1500 kilometres as well as aircraft. Upper-tier TMD comprises land-based mobile Theatre High-Altitude Area Defence (THAAD) and sea-based Navy Theatre Wide Defence (NTWD) systems. Their principal targets for interception are ballistic missiles with a range of up to about 3,500 kilometres.²⁶

Missile Defence of the Bush (Junior) Administration Program (2000s)

The new Bush Republican administration, inaugurated in January 2001, has been enthusiastic in the development and deployment of missile defence, whether the NMD or the TMD. Concerning the NMD system, shipboard, air-borne, and even space-based intercept systems seem to be included in addition to the fixed land-based intercept system pursued by the Clinton administration. On the other hand, the Bush administration has avoided making demarcation between the NMD and the TMD and has expressed its intention to develop missile shields under the collective title of 'missile defence', while stressing the effectiveness of sea-based and/or air-borne intercept system.²⁷

Due to the restriction to develop and test the NMD under the ABM Treaty, President Bush withdrew from the treaty on December 13, 2001. As a result, the legal framework regulating the development and deployment of TMD disappeared. The success or failure of the TMD now entirely depends on the technological and financial capacity of the US and countries pursuing the technical research and development program (such as Japan), and the countermeasures likely to be adopted by Russia, China, and other nations which have opposed the missile defence. Up to now the Russian and Chinese reaction to the Bush administration's announcement of its departure from the ABM Treaty have been

somewhat restrained. President Putin referred to the US decision to leave the treaty as a 'mistake' but stated that the decision was no threat to Russian security. China also has avoided any statement directly criticizing the US departure from the treaty and has not taken any concrete countermeasure. China and Russia's real attitudes towards the US NMD, therefore, will not become apparent until the architecture of the US NMD is clearly identified.²⁸

Nuclear Strategies of Other Countries and Current Development

The development of other countries apart from US and Soviet/Russia in nuclear strategy and current development can be summarized as follows:

- u Other nations including US and Russia admit to having nuclear weapons (their estimated quantity is indicated in parentheses): China (434), France (482), Russia (13,200), the United Kingdom (200) and the United States (15,500). Israel is known to have the capability to deploy nuclear weapons, and still other countries, including Iran, Iraq, Libya, Syria and North Korea, are known to have nuclear weapons programs. However, the Iraqi program has been dismantled and Libyan efforts are long in abeyance. At present the only country of immediate concern to the US is North Korea.²⁹ In May 1993, North Korea launched her first missile, followed by the test firing of an Anti-Ship Cruise Missile with a range of about 160 kilometres in July 1994.³⁰ Again in August 1998 North Korea launched the test firing of a multi-staged ballistic missile across Japan. This action led the US and Japan governments to stress the importance of missile defence and to agree in the following month upon the 'pursuit of joint technical research' on missile defence. The missile defence system covered by US and Japan joint technical studies is the Navy Theatre Wide Defence (NTWD). The NTWD is a system to intercept ballistic missiles and separate warheads in mid-course (halfway along their flight path) or terminal stage by using the improved Aegis system and the Lightweight Exo-Atmospheric Projectile (LEAP) carried by standard-3 missiles launched from Aegis warships.³¹

²⁶ Ibid, pp. 35 – 36.

²⁷ Ibid, p. 40.

²⁸ Ibid, p. 55.

Due to the fact that Japan is within the reach of missiles from North Korea, China and Russia, it also developing a missile defence program. China, not to speak of North Korea, has taken a critical posture against Japan's research on missile defence. Russia also criticized the technical research on the NTWD pursued by the US and Japan despite its signing of the 1997 TMD demarcation agreements that have paved the way for the development and deployment of the TMD systems. The criticism can be summarized into the following five aspect. First, the NTWD covering Japan will spark an arms race in East Asia, deteriorating the regional strategic environment, and at the same time portends Japan's rise to a military power. Second, the NTWD has a latent capability to intercept strategic ballistic missiles and thus destabilize US-Russian and US-Chinese mutual deterrence. Third, the NTWD may possibly be used for the defense of Taiwan since it is a mobile shipboard system. Fourth, the development and deployment of the NTWD is politically divisive, creating a new security separation where the US, Japan and Taiwan confront China and North Korea. However, China and North Korea must recognize that the prime mover of the arms race in East Asia is not the missile defence program by Japan or Taiwan but their own development and strengthening of ballistic missile forces. Japanese or Taiwanese missile defence programs are simply to cope with an increase in the ballistic missile threat from China and North Korea.³²

On the other region, still, the threat of nuclear war and the spread of nuclear weapons remains, evidenced by the nuclear tests of India and Pakistan in 1998. A newly elected government in India conducted a series of five underground nuclear tests in mid-May 1998, India's first such tests in 24 years for security reasons. In late May Pakistan, India's neighbor to the west, detonated for the first time a series of its own nuclear devices, and announced it was prepared to mount nuclear warheads on a newly developed missile. Pakistan conducted what it claimed were five nuclear tests on May 28, including the deto-

nation of one high-yield fusion device, followed by an additional test on May 30. Following the test, Pakistan declared that it had no immediate plans to conduct additional nuclear tests, a position that India also expressed after completing its tests May 13. Foreign ministers representing the five declared nuclear powers met on June 4 in Geneva, Switzerland, to develop a strategy for diffusing the tension between Pakistan and India and averting a regional nuclear arms race. After the tests, Pakistan's government released a statement saying it was ready to attach nuclear warheads to the nation's newly developed Ghauri missile, which has a range of about 1400 kilometres (about 900 miles). Some military experts estimated that India has the technology to deploy nuclear-tipped missiles with a range exceeding 1900 kilometres (1200 miles) within a matter of months.

CONCLUSION

The advent and development of atomic weapons ushered a revolution in military affairs. The increasing accuracy of the delivery vehicles and the increase in the membership of the atomic club led to an atomic arms race to maintain the 'stable balance of terror'. The fact that there has been no World War III has proved the effectiveness of the atomic weapons in deterring a nuclear war, though it has led to a rise in 'limited conventional wars', which have been fought. With the end of the Cold War between the former Soviet Union and the United States, the threat of an all-out nuclear attack has diminished. It is unlikely that Russia would undertake a massive first strike against the United States, and both countries have significantly reduced their nuclear forces.

During most of the Cold War, the Soviet Union and the United States were unable to achieve reductions in their offensive nuclear arsenals, which consequently grew to preposterous sizes. It would be wrong to suggest that a world without nuclear arms would be without danger, even nuclear danger. The risk of cheating would be real, as would the risk that a possible conventional war might spin out of control and spur nuclear rearmament. The point, however, is that those perils are lower by several orders of magnitude than the ones in the world of nuclear anarchy toward which our inaction points us

³² John Pike, The Ballistic Missile Defence Debate, Current History Journal, Vol 96, No 609, April 1997, p. 159.

³³ Dennis M. Gormley, *Dealing with the Threat of Cruise Missiles*, Adelphi Paper 339, Oxford University Press, New York, 2001, pp. 27 – 28.

³⁴ Ogawa Shinichi, op. cit, p. 36

³⁵ Ibid, pp. 49 – 50.

now. We are not called to choose between danger and perfect safety but between two species of danger. Reflection shows that the level of risk under an abolition agreement is far lower than that which exists in a world without one.

Since the destruction of Nagasaki, no nuclear weapon has been used in war. In a world of proliferating arsenals no one knows how long this good luck will hold. What we can and do know is that over the

long run no civilization can be based on a willingness to kill hundreds of millions of innocent people. As long as the Soviet Union existed, the West could at least argue that it resorted to this extreme means in order to counter the horrific threat posed by an immense totalitarian empire. With the collapse of the Soviet Union, that justification disappeared. The nuclear powers are left with their own insistence, unrelated to any particular peril, on preserving these means of annihilation.

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Mej Mohd Hanim bin Saip was commissioned on 8 March 1986 into the Royal Military Police Corps. He served in various appointments within the corps, mostly as the Investigating Officer of the Special Investigation Branch and also as Staff Officer at Division Headquarters. He holds Bachelor of Law (UiTM) degree and is a graduate of the Malaysian Armed Forces Staff College in 2003 with a Diploma in Strategic and Defence Studies (Dist) (UM). Currently he is the Staff Officer 2 Legal at the Army Training Headquarters.

WAR IN IRAQ

— By : Lt Kol Saiful Anwar bin Md Ali —



INTRODUCTION

Nation building, nation destroying is a famous caption in international relations. March 20th last year was a historical date for Iraq when the U.S. declared war against them. What could be seen in the two weeks after the date were the third wave forces against the second wave forces involved in war. Mass destruction could be seen in Iraq due to the third waves sophisticated weapons with very little retaliation from Iraq. All the theoretical aspects of war had been portrayed in this war. The theory of limited war has been rightly practiced by the U.S. but not by Iraq. The U.S. objective in this war was to ensure the downfall of the Saddam regime, which was considered as state sponsor of terrorism. The U.S. has categorized Iraq as a rogue state and among them were Iran, Syria and North Korea. Anyhow, for Iraq, there was no such thing as practicing any kind of limited war. To them, they were facing the enemy with total war.

Causes of War

Before we analyse the causes of war in Iraq, let us look on the theoretical aspects on the causes of wars. The causes of war have long been a source of

mystery but many ideas have been developed on what causes them. There are many scholars that have contributed their ideas on the causes of wars. The most widely spoken of the causes of wars are; existence of a common enemy to a nation, existence of an outside threat to a nation, mob mentality or the power of inspiration in the masses and inspiration by some other outside cause. David W. Ziegler proposed that human nature is the primary cause of war. Other reasons mentioned are the international system, nationalism, availability of instruments of violence to leaders, leaders' belief in prospect of victory and that one state chooses to use force over the other. Kenneth Waltz in his 'Man, the State and War', in analysing the causes of conflicts and wars looks at the three levels of analysis: individual, state and international systems.

The most significant and frequently quoted causes of wars, perhaps, is Stephen Van Evera's in his 'Causes of War: Power and the Roots of Conflicts'. He demonstrates that ideas from the realist paradigm can offer strong explanations for international conflicts. He frames five conditions that increase the risk of interstate war: false optimism about the likely outcome of a war, a first strike advantage, fluctuation in the relative power of states, circumstances that allow nations to parley one conquest into another, and circumstances that make conquest easy. According to him, all but one of these conditions – false optimism – rarely occurs today, but policymakers often erroneously believe in their existence. He argues that these misperceptions are responsible for many modern wars. He also assesses the possibility of nuclear war by applying all five hypotheses to its potential onset.

There are also other explanations for war according to various International Relations school of thoughts. Realists explain that war happens due to state aggressions and that conflicts are inevitable in an anarchic world. Liberalists explain that war is due to accidents and instability, but are avoidable through effective institutions. Marxists look at war as a capitalist phenomenon where states must

conquer markets that their economies require to avoid recessions and depressions.

Basing on the theoretical aspects of the causes of wars mentioned above, the prospect of victory, the five hypotheses and the Marxist theories have portrayed to us that the U.S. utilizes all these theories for its justification to create and conduct war against Iraq. The U.S. positive victory against Iraq had been established when the arms inspector headed by Hans Blix acknowledged that Iraq had no chemical weapons to threaten neighbouring countries. In reality, Iraq is the most inspected country in history, and even former weapons inspectors like U.S. Marine Capt. Scott Ritter have repeatedly testified that Iraq poses no threat to any other country.¹ Therefore the conquest will be easy due to little resistance and of course that the U.S. has first strike capabilities. The Marxist theory which is to exploit the oil market also make sense basing on the theory that those who control the Persian Gulf will control the world due to oil wealth.

War Scenario in Iraq

The U.S. sidelined the United Nations Security Council and blatantly ignored world opinion when it launched the invasion of Iraq at the crack of dawn on March 20 by raining thousands of missiles and bombs on Baghdad. Now, more than a week into the U.S. orchestrated and Bush-led invasion of Iraq, ostensibly to disarm Iraq of weapons of mass destruction, not a single credible piece of evidence has yet been found. Time and again, experts had revealed that Iraq's remaining weapons of mass destruction are not formidable enough to justify the U.S.-led invasion. The latest came from Roger Hill, a former UN chief arms inspector in Iraq from 1991 to 1998, who said that the UN Commission destroyed 95% of such weapons. He said whatever weapons of mass destruction the Iraqis still had could not be effectively used on the battleground and could not significantly alter the regional balance of power.

What is patently clear is that the invasion of Iraq is not so much about weapons of mass destruction and the threat of these falling into the hands of terrorists or that of the once Western-backed and U.S.-nurtured bogeyman himself, the dictator Saddam Hussein. This is a political war, a war of power which is being seen as part of a wider U.S. game plan which involves access to oil and the redrawing of the map of the Middle East to further the interests of Washington and its key ally in the region, Israel. It is also a war for the American audi-

ence as the psychological impact of the September 11 terror attacks was also behind the decision to launch the attack on Iraq, even though there had been no credible report of links between the secular Baathist Iraq and the al-Qaeda terrorist group. The apocalyptic vision of a new, more democratic Middle East rising from the ashes of the old is a tantalizing fantasy shared only by Israel and a coterie of right-wing palace advisers around President George W Bush. The plan was simple enough. The U.S. and Britain would come over, take over Baghdad, upturn the government and take everybody through a new era. And, everybody would live happily ever after, that is after Operation Iraqi Freedom.

Meanwhile, nobody knows it will end in Baghdad, except that it would surely end with the inevitable brutal victory for the Anglo-American coalition forces. But victory at what price? At the price of Manila, Hue and Beirut put together? This is the spectre rising as this war continues. And, after the dust has settled? A new era compounded by an expanded version of the Occupied territories of West Bank and Gaza Strip? General Douglas MacArthur, who led the successful U.S. military administration in post-war Japan, would have turned in his grave when his name was uttered by officials in the run up as to the type of post-Saddam military occupation government to be set up.

This war is wrong. It did not need to happen; it was unnecessary and was avoidable. There was still time; there were other ways and reasonable alternatives even for regime change. But they were not honestly explored. The murder of the democratically elected President Salvador Allende in Chile and the bloody removal of South Vietnamese leader Ngo Dinh Diem are two such alternatives. The quick victory promised by a blitzkrieg across the Iraqi desert has floundered in a quagmire of false assumptions. It will not be a quick war as planned by Washington and as hoped for by the detractors. The internal coup did not happen and there was no popular uprising. The Pentagon is stunned and bewildered because for all its talk of shock and awe, Baghdad has not collapsed according to plan. They are outgunned, outmanoeuvred and have almost no air defences, yet the Iraqi armed forces, or whatever that is left of it, continue to fight the world's most powerful military force. It wasn't supposed to be like this. The Washington hawks had predicted that the Iraqi army would not fight and would flee as they did in 1991. They now have to go through Plan B and must confront the reality of thousands of Iraqis willing to fight back and die if they have to in urban warfare, that kind of asymmetric warfare that is the only way to fight a modern, well-equipped army.

¹ Richard Becker, Eleven Years After the Gulf War: What's Really Behind U.S. Hostility towards Iraq? See <http://www.iacenter.org>

It was assumed that the Americans would be welcomed as liberators from tyranny. Instead of cheers and garlands, there is resistance, distrust and resentment. And, yes, there might even have been a desire for change in the minds of most right thinking Iraqis but not via an illegal U.S.-led invasion. Instead, the Iraqi military-pro-Saddam or not-are putting up a fight as any soldier or militiaman would rightly do if their homeland is invaded; and worse still, billions around the globe are seeing and hearing reports that non-combatants, especially women, children and the elderly, are being killed by the bombs and bullets of the invading forces.

Despite pronouncements that this war has nothing to do with religion, it is almost impossible to curb feelings amongst the Arab and Muslim population at large that it is such. As the U.S.-led Anglo American coalition rolls by the rivers of Babylon, troops are marching through the cradle of civilization, following the footsteps of Biblical prophets and ancient conquerors. Already a major part of the battle for the hearts and minds of the people is lost. If scenes of civilian carnage become routine in the push to the Iraqi capital and during the inevitable battle for Baghdad, the political war for Iraq could be lost even before the military one is won.

In the long term, the American arrogance and power, which has already begun to undermine the effectiveness of multilateral institutions, will erode its credibility. This in turn will stoke anti-American sentiment, already widespread in several parts of the world, and encourage the very forces of extremism, which the Bush administration seeks to counter. The world fears as to what form of blowback would emerge out of all this carnage in the not too distant future. As the hope that the American invasion of Iraq will end with minimum suffering and loss of life has exploded with the increasing number of innocent civilian deaths, it was clear that those political leaders who set this conflict in train now carry an enormous responsibility. The responsibility is all the greater since it is by no means clear that it is fortified by international law, morality logic and common sense. The war makes it all the more imperative that the bigger Middle East problem-the creation of a viable and credible Palestinian state-is tackled and resolved quickly.

In a distant background, the Security Council convened an emergency session on the war in Iraq at the urge of the Non-Aligned Movement, offering the chance to non-Council members to express their views on the subject, strengthening world public opinion against the war. The agenda was only useful for airing frustrations over the unilateral action taken by the two of the permanent members of the Security Council, the U.S. and Britain, about the happening in Iraq. But, the UN just cannot fiddle while the Baghdad policy has never been as sharply in evidence as in the persecution of this war. The UN must now carve a way to act in defence of peace and justice, in deeds, not in words.

CONCLUSION

As been said earlier, nation building, "nation destroying". Now it is the time for U.S. to rebuild the nation again. The U.S faces the difficult task of reconstructing Iraq and repairing the damage done to international institutions and relations with its Western allies while at the same time stamping down the fierce anti-Americanism that has sprung up around the globe. Succeeding at those tasks would go a long way towards lessening tensions in the Middle East and elsewhere around the globe and muting criticism of the U.S. for the unilateral approach it took in the war. But failure to do so would likely increase global tensions and further fuel anti-Americanism, an outcome that poses huge risks for business.

Multinationals depend on a multilateral world. A continued rise in tensions would be anathema to the open, international economic system on which growth and prosperity depends. Globalisation, the driver of the 1990s boom, could suffer if trade talks break down in acrimony. This post-war period is the real challenge for the world and globalisation, as we know that the world could soon slip into recession. If we blow the post-war recovery, the stakes will be very large.

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Lt Kol Saiful Anwar bin Md Ali was commissioned in 1985 into the Royal Malay Regiment. He has attended various military courses locally, particularly Staff College in 1999. He has served in several appointments in units and training establishments. He holds a Masters Degree in Policy Studies and Security Analysis from UKM, an Advanced Diploma and a Diploma in Strategic and Security Studies, both from UKM as well as a Diploma in Strategic and Defence Studies from UM. Currently he is serving as Commanding Officer 6 RAMD. He is a regular contributor to the Jurnal Sorotan Darat and mainly relates to strategic and security issues.

e - DOKTRIN: DARI KONSEPSUAL KE REALISASI

— oleh : Bahagian Pembangunan Doktrin —

PENGENALAN

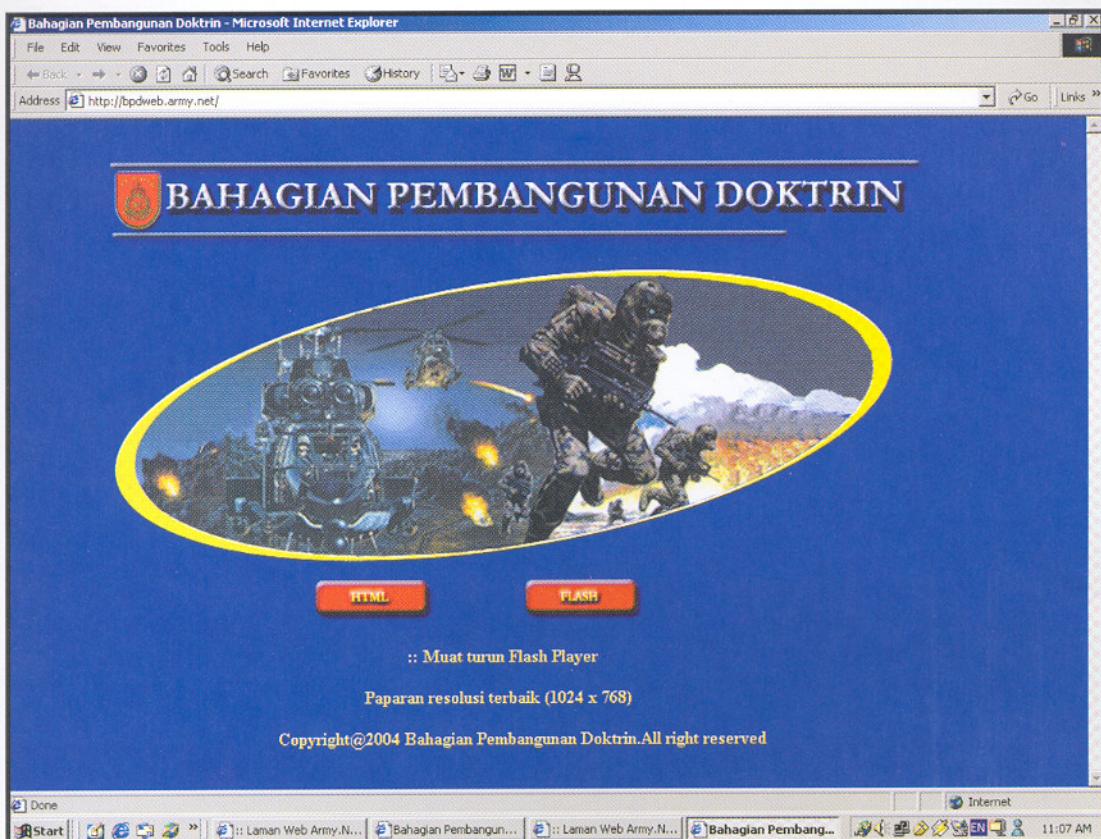
Bahagian Pembangunan Doktrin, MK Latihan TD merupakan organisasi yang memainkan peranan dan tugas yang penting dalam menjana dan menentukan doktrin dan manual-manual yang digunakan oleh TD adalah terkini dan bersesuaian dengan penggunaan TD masa kini dan juga dapat memenuhi keperluan TD di masa – masa hadapan. Sesuai dengan perkembangan teknologi maklumat dan komunikasi, bahagian ini telah melangkah ke era bekerja secara elektronik dengan meluas meliputi semua bidang tugas. Inisiatif ini telah di realisasikan melalui Projek ICT Fasa 1 yang telah di lancarkan oleh MK Latihan TD dalam tahun 2002 dan dilaksanakan dalam tahun 2003.

Projek ICT Fasa 1 merangkumi penyediaan makmal komputer untuk pusat-pusat latihan dan juga penubuhan e – Doktrin, Bahagian Pembangunan Doktrin, MK Latihan TD. Pengurus Projek ICT Fasa 1 Pemerintahan Latihan TD adalah Mej Wan Rohizan bin Hassan (PS2 Pengurusan Sistem) dan setiap Pusat Latihan TD melantik Pengurus Projek masing - masing manakala Pengurus Projek yang telah dilantik untuk e-Doktrin adalah Mej Ahmad Tahir bin Mohd Said dan di bantu oleh Kapt Hairulnizam bin Samuri.

OBJEKTIF

Dalam merencanakan setiap projek, perkara asas yang selalu ditetapkan adalah objektif yang ingin dicapai. Projek e-Doktrin juga tidak terlepas dari pendekatan ini. Objektif-objektif yang ditetapkan untuk e-Doktrin merangkumi perkara-perkara berikut:

- Menyediakan kemudahan dan peralatan kepada staf Bahagian Pembangunan Doktrin untuk meningkatkan produktiviti dan kualiti kerja.
- Sebagai satu 'tool' yang dapat membantu dalam menganalisis keperluan doktrin, menguji dan menghasilkan doktrin TD.
- Membangun dan mengembangkan doktrin TD supaya sentiasa dikemas kini.
- Menerbitkan dan mendigitalkan doktrin/jurnal/laporan latihan yang melibatkan TD dengan negara asing dalam bentuk cetakan dan digital.
- Menyebarluaskan maklumat terkini mengenai peperiksaan kenaikan pangkat Kapt ke Mej dan aktiviti bersangkutan dengan doktrin dalam bentuk teks dan multimedia.



Gambar 1. Muka Hadapan Laman Web e-Doktrin

PELAKSANAAN PROJEK

Untuk merealisasi projek e-Doktrin, pelaksanaannya boleh dibahagikan kepada beberapa peringkat seperti berikut:

u Peringkat Pertama. Peringkat ini memainkan peranan dalam membentuk dan mencorakkan bagaimana e-Doktrin akan berwajah setelah siap projek sepenuhnya. Persiapan dan penyediaan yang lengkap dan teliti telah dilaksanakan oleh MK Latihan TD melalui Sel Pengurusan Sistem. Perbincangan, kajian dan persempahan kepada pihak-pihak yang bertanggungjawab telah dilakukan untuk menentukan projek ini bermula di atas landasan yang betul dan juga memenuhi semua keperluan dari segi prosedur dan juga perkakasan dan perisian yang diperlukan sesuai dengan konsep-'money well spent'.

u Peringkat Kedua. Peringkat kedua adalah pemasangan dan ujian sistem yang melibatkan penyediaan Rangkaian Kawasan Setempat (LAN) dan juga pengkalan data. Peringkat ini amat penting kerana reka bentuk dan kemampuan sistem dan keperluan pengguna perlu dikaji, dihalusi dan digabungkan untuk mendapat kepuasan pengguna dan sistem di manfaat sepenuhnya. FELDA Prodata System (syarikat yang berjaya melalui proses tender) dipilih untuk melaksanakan Projek ICT Fasa 1 dan telah memberi perkhidmatan yang memuaskan dan berjaya memenuhi keperluan-keperluan yang tercatat dalam kontrak. Projek e-Doktrin telah dimulakan pada awal tahun 2003 dan telah siap sepenuhnya pada penghujung tahun tersebut. Walaupun terdapat beberapa perkara yang tidak tercatat dalam kontrak namun syarikat ini telah bermurah hati untuk membantu dan memenuhi keperluan tambahan yang

diminta untuk memastikan kejayaan projek e-Doktrin.

u Pusat Teknologi Maklumat (PUSTEKMA) turut membantu dalam peringkat ini dengan memberi khidmat nasihat dan bantuan teknikal untuk membolehkan e – Doktrin bekerja dalam rangkaian Armynet. Dalam peringkat ini banyak perbincangan, pertukaran pendapat dan ujian telah diadakan demi untuk mencapai suatu keputusan yang 'amicable' dan tindakan susulan yang bersesuaian.

u **Peringkat Ketiga.** Peringkat ini adalah penggunaan sistem yang telah dipasang dengan sepenuhnya. Syarikat FELDA Prodata System

dan PUSTEKMA hanya menyediakan perkakasan dan perisian dan juga kemudahan rangkaian Armynet manakala pengisian data dan maklumat ke dalam pengkalanan dilakukan oleh staf Bahagian ini. Peringkat ini memerlukan staf yang terlatih dan juga bahan-bahan yang telah dikenal pasti untuk didigitize kepada format digital. Peringkat ini adalah berterusan kerana data dan maklumat yang penting dimasukkan dalam pengkalanan data, data/maklumat dikemas kini dan yang lama/lapuk dikeluarkan. Selain dari kemahiran dan pengalaman, aspek kreativiti juga penting agar apa dan cara bagaimana data/maklumat dipamerkan dalam laman web dapat menarik pengguna untuk melayarnya dengan mudah.



Gambar 2. Muka Utama Laman Web e-Doktrin

ORGANISASI e – DOKTRIN

Organisasi e-Doktrin yang telah diwujudkan untuk mengurus dan mengendalikannya dan terdiri dari dua orang pegawai (berkelayakan dalam bidang IT) dan seorang LLP. Senarai staf adalah seperti berikut:

- u PS 3 e-Doktrin - Kapt Hairulnizam bin (3006545) Samuri
- u PS 3 Juruanalisa Sistem - Kapt Nur Hartini (3009723) bt Abd Rahman
- u Kerani - Kpl Berai ak Jaul. (1105630)



Gambar 3. Gambar Staf Dalam Bentuk Digital

KEMUDAHAN - KEMUDAHAN YANG DISEDIAKAN

Selain dari kemudahan yang diperoleh dari Rangkaian Kawasan Setempat (LAN), kemudahan – kemudahan lain yang disediakan oleh e-Doktrin adalah seperti berikut:

- u Organisasi Bahagian Pembangunan Doktrin.
- u Visi dan Misi Bahagian Pembangunan Doktrin.
- u Sejarah Ringkas Bahagian Pembangunan Doktrin.
- u Berita dan aktiviti.
- u Hierarki Doktrin
- u Sorotan Darat.
- u Galeri Eksesais.
- u Laporan Eksesais.
- u Manual TD.
- u Peperiksaan.

e – Doktrin boleh diakses oleh warga TD dari peringkat MK TD sehingga ke peringkat Briged. e – Doktrin boleh dilayari dengan menggunakan alamat – alamat berikut:

- u <http://bpwdweb.army.net>
- u <http://web.army.net>
- u <http://ematesmltd.army.net:81>

RANCANGAN HADAPAN

Bidang teknologi maklumat dan komunikasi merupakan bidang yang dinamik dan berkembang maju. Pengisian dan pentadbiran data dan maklumat yang dilaksanakan oleh Bahagian ini adalah berterusan dan perlu seiring dengan perkembangan bidang teknologi maklumat dan komunikasi. Sesuai dengan prinsip menyediakan perkhidmatan yang terbaik kepada semua warga TD, rancangan hadapan e – Doktrin adalah seperti berikut:

- u Meningkatkan kemampuan dan keupayaan e – Doktrin dengan perolehan perkakasan dan perisian terkini seperti injin carian (search engine) yang berkuasa tinggi.
- u Peperiksaan Kapt ke Mej Bertulis dilaksanakan secara 'online' pada tahun 2008.
- u Laman web yang interaktif.

RUMUSAN

e-Doktrin telah membuka satu dimensi baru kepada staf Bahagian Pembangunan Doktrin untuk bekerja dalam persekitaran elektronik dan juga penggunaan teknologi maklumat dan komunikasi untuk meningkatkan produktiviti, prestasi dan juga kualiti kerja yang dihasilkan. Pengalaman, pendedahan dan kemahiran yang diperoleh sepanjang penglibatan dalam projek tersebut telah menambahkan satu lagi cabang kemahiran dalam perkhidmatan staf yang terlibat. e-Doktrin mampu memenuhi visi dan wawasan MK Latihan TD khasnya dan TD amnya dalam membentuk satu angkatan yang kredibel, disegani oleh kawan dan digeruni oleh lawan.