

**No. 59**

**FORCE MODERNISATION TRENDS  
IN SOUTHEAST ASIA**

**Andrew Tan**

**Institute of Defence and Strategic Studies  
Singapore**

**JANUARY 2004**

*With Compliments*

This Working Paper series presents papers in a preliminary form and serves to stimulate comment and discussion. The views expressed are entirely the author's own and not that of the Institute of Defence and Strategic Studies

**The Institute of Defence and Strategic Studies (IDSS)** was established in July 1996 as an autonomous research institute within the Nanyang Technological University. Its objectives are to:

- Conduct research on security, strategic and international issues.
- Provide general and graduate education in strategic studies, international relations, defence management and defence technology.
- Promote joint and exchange programmes with similar regional and international institutions; organise seminars/conferences on topics salient to the strategic and policy communities of the Asia-Pacific.

### **Research**

Through its Working Paper Series, *IDSS Commentaries* and other publications, the Institute seeks to share its research findings with the strategic studies and defence policy communities. The Institute's researchers are also encouraged to publish their writings in refereed journals. The focus of research is on issues relating to the security and stability of the Asia-Pacific region and their implications for Singapore and other countries in the region. The Institute has also established the S. Rajaratnam Professorship in Strategic Studies (named after Singapore's first Foreign Minister), to bring distinguished scholars to participate in the work of the Institute. Previous holders of the Chair include Professors Stephen Walt (Harvard University), Jack Snyder (Columbia University), Wang Jisi (Chinese Academy of Social Sciences) and Alastair Iain Johnston (Harvard University). A Visiting Research Fellow Programme also enables overseas scholars to carry out related research in the Institute.

### **Teaching**

The Institute provides educational opportunities at an advanced level to professionals from both the private and public sectors in Singapore and overseas through the Master of Science in Strategic Studies and Master of Science in International Relations programmes. These programmes are conducted full-time and part-time by an international faculty from July each year. The Institute also has a Doctorate programme in Strategic Studies/International Relations. In 2004, it will introduce a new Master of Science in International Political Economy programme. In addition to these graduate programmes, the Institute also teaches various modules in courses conducted by the SAFTI Military Institute, SAF Warrant Officers' School, Civil Defence Academy, Singapore Technologies College and the Defence, Home Affairs and Foreign Ministries. The Institute also runs a one-semester course on '*The International Relations of the Asia Pacific*' for undergraduates in NTU.

### **Networking**

The Institute convenes workshops, seminars and colloquia on aspects of international relations and security development which are of contemporary and historical significance. Highlights of the Institute's activities include a regular Colloquium on Strategic Trends in the 21<sup>st</sup> Century, the annual Asia Pacific Programme for Senior Military Officers and the biennial Asia Pacific Security Conference (held in conjunction with Asian Aerospace). Institute staff participate in Track II security dialogues and scholarly conferences in the Asia-Pacific. The Institute has contacts and collaborations with many think-tanks and research institutes in Asia, Europe and the United States. The Institute has also participated in research projects funded by the Ford Foundation and the Sasakawa Peace Foundation. The Institute serves as the Secretariat for the Council for Security Cooperation in the Asia-Pacific (CSCAP), Singapore. Through these activities, the Institute aims to develop and nurture a network of researchers whose collaborative efforts will yield new insights into security issues of interest to Singapore and the region.

## ABSTRACT

Southeast Asian states have, in recent years, engaged in force modernization programs to varying degrees. Although the situation does not comply with a strict definition of an arms race, it is also obvious that what Southeast Asian armed forces are doing is not maintaining the military status quo, as they are enhancing existing capabilities as well as acquiring new capabilities. A complex myriad of factors account for the phenomenon of military modernization and arms build-up in the region, such as prestige, corruption, supply side factors, economic growth, self-reliance in the context of a perceived reduction of the US commitment to the region, new requirements arising from EEZ surveillance and protection, the impact of domestic factors, inter-state tensions and the broadening of regional security concerns. Analysts fear that military modernization efforts could be potentially destabilizing, especially given the presence of inter-state tensions and contentious bilateral issues. The regional arms build-up has also placed constraints on multilateral security cooperation due to its reinforcement of mutual suspicions over each other's intentions. This points to the need for arms control and other political and diplomatic measures, such as confidence-building measures (CBMs) which could lessen tensions and put a brake on the competitive arms build-up. The most promising so far have been CBMs in the form of military multilateral exercises and exchanges promoted by benign outside powers, such as RIMPAC and Cobra Gold, and the Five Power Defence Arrangements (FPDA). Such military-level CBMs must be expanded considerably to enhance functional multilateral cooperation, lower mutual mistrust, and focus attention on common security threats, such as those emanating from regional flashpoints involving China, emerging non-traditional security threats such as arms smuggling, illegal migration and piracy, as well as humanitarian intervention and peacekeeping, such as that carried out in East Timor from 1999. In the post-11 September era, the obvious need for multilateral security cooperation to counter the threat emanating from transnational terrorism in Southeast Asia is also an emergent factor that could provide the necessary political will towards overcoming barriers of mutual suspicions. The opportunities provided by such an impetus should not be missed.

\*\*\*\*\*

## BIOGRAPHY

**Dr Andrew Tan** is Assistant Professor at the Institute of Defence and Strategic Studies (IDSS), Nanyang Technological University, Singapore. He holds a PhD (Sydney), Masters (Cambridge) and bachelors and honours (political science) degrees from the National University of Singapore. He is a frequent speaker both locally and internationally, and is consulted on regional security issues by governments and the international media. His research interests are conflict in Southeast Asia (terrorism, insurgency, inter-state tensions and force modernization), and security issues in the Asia-

Pacific. He is the author of *Intra-ASEAN Tensions* (London: Royal Institute of International Affairs, 2000), *Armed Rebellion in Southeast Asia: Persistence and Implications* (Canberra, Strategic and Defence Studies Centre, Australian National University, 2000), *Singapore-Malaysia Relations: Troubled Past and Uncertain Future?* (Hull: Hull University, 2001) and *Domestic Determinants of Singapore's Security Policy* (Hawaii: Asia-Pacific Center for Security Studies, 2001). His major co-edited work include *Non-Traditional Security Issues in Southeast Asia*, *Seeking Alternative Perspectives on Southeast Asia*, and *The New Terrorism: Anatomy, Trends and Counter-Strategies*. His articles and book reviews have appeared, or are forthcoming, in Contemporary Southeast Asia, Studies in Conflict and Terrorism, Terrorism and Political Violence, Panorama, Cambridge Review of International Affairs, International Affairs and Harvard Asia Quarterly.

## **FORCE MODERNISATION TRENDS IN SOUTHEAST ASIA**

Southeast Asian analysts have observed that there has been very clear evidence of a military build-up in the region.<sup>1</sup> All countries in the region have engaged in force modernization programs to varying degrees, although this does not equate with military effectiveness. While the Revolution in Military Affairs (RMA) has had varying effects on the region's military capabilities, it is important to note that much more than the mere acquisition of modern weapons systems is required for a true RMA to take place. For instance, there is also the need for integrated logistical capabilities, joint force doctrines, a very high-level of technical support and training and C4ISR capabilities. It is evident that few countries in the region have the technical and economic capacity to implement a true RMA, nor do they all want to, given the local conditions and the continued salience of internal security threats. In addition, any net assessment will require a number of other factors to be taken into account, such as the degree of military preparedness, natural resources, industrial capacity, national morale and diplomacy.<sup>2</sup> However, this is not within the scope of this study.

This study will focus on an examination of the evident phenomenon of force modernization in Southeast Asia. It will identify salient trends, examine the factors behind force modernization and assess the implications of current force modernization programs on regional security. A number of questions will clarify the salient issues: What is the evidence for an arms build-up in the region? How do we make sense of the regional arms build-up – is it an arms race? What are the force modernization trends in Southeast Asia? What are the factors which might account for this arms build-up? What has been the impact of the 1997 regional economic crisis on arms modernization?

### **Regional Arms Modernization**

There is strong evidence of a concerted push towards military modernization in Southeast Asia since 1975. The military build-ups, particularly on the part of the ASEAN states picked up momentum in the 1980s and 1990s. However, they have since slowed but not halted due to the financial crisis that afflicted the region since 1997.

---

<sup>1</sup> See, for instance, Tim Huxley and Susan Willett, Arming East Asia (Adelphi Paper, International Institute of Strategic Studies, London, 1999), and Desmond Ball, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," International Security, vol.18, no.3 (Winter 1993/94).

<sup>2</sup> Hans J Morgenthau, Politics Among Nations: The Struggle for Power and Peace (New York: Alfred Knopf, 1949), p.74.

A comparison of the military capabilities measured according to the numbers of military personnel and the number of major combat systems fielded in 1974 (just before the defeat of the US-supported Saigon regime) and in 1998 (just when the economic crisis affected Southeast Asia) will provide a clear indication of the trend towards a general military build-up in Southeast Asia.

According to Table 1 (compiled from data derived from The Military Balance 1974-75), the then ASEAN states of Singapore, Malaysia, Indonesia and the Philippines could be described as militarily weak, with small numbers of major weapon systems. Thailand was an exception given its proximity to Indochina where the Vietnam War was still raging. Moreover, as the frontline state, it had the support of the US, which provided substantial military aid, including the provision of military hardware.

TABLE 1

Comparative Military Capabilities of the Southeast Asian States (1974)

<u>Country</u>	<u>Military Manpower</u> (1)	<u>Tanks</u>	<u>APCs</u>	<u>155mm Howitzer</u> s	<u>Missile Craft</u>	<u>Combat Helicopters</u>	<u>Combat Aircraft</u>
S'PORE	52,000	75	?	0	6	0	65
MALAY SIA	92,000	0	700	0	8	0	36
INDON ESIA	270,000	?	?	0	...(2)	0	...(2)
THAILA ND	396,000	195	200	12	0	0	105
PHILIPP INE	274,000	8	20	5	0	0	36
BRUNEI (3)	...	...	...	...	...	...	...
N.VIET NAM	...(4)	...(4)	...(4)	...(4)	...(4)	...(4)	...(4)
BURMA	159,000	0	?	0	0	0	11
LAOS	63,000	10	?	?	0	0	81(5)
CAMBO DIA	220,000	?	175	20	0	16	64

(1) including reserves

(2) the large Soviet-supplied naval and air force complement existed on paper only, as many were delivered before 1965 and were by 1974 running down or non-operational due to a lack of spares.

- (3) Brunei became independent in 1984; in 1974, its defence was Britain's responsibility.
- (4) Vietnam was still at war in 1974, making a meaningful comparison difficult given the scale of the conflict; the unification in 1975 was the result of the victory of the North.
- (5) Laos was still at war at this stage, and most of the combat aircraft consisted of US-supplied T-28 ground attack aircraft used against the Pathet Lao forces, which eventually gained power in 1975.

Source: The Military Balance 1974-1975 (London: International Institute of Strategic Studies, 1974)

TABLE 2  
Comparative Military Capabilities of the ASEAN States (1998)

<u>Country</u>	<u>Military Manpower</u>	<u>Tanks</u>	<u>APCs(2)</u>	<u>155mm Howitzers</u>	<u>Missile Craft</u>	<u>Combat Helicopters</u>	<u>Combat Aircraft</u>
S'PORE	323,000 (1)	410	1074	123	24	20	157
MALAY SIA	150,000	26	1210	12	14	0	89
INDONESIA	876,000	455	696	0	14	0	91
THAILAND	506,000	787	1117	218	16	0	206
PHILIPPINES	249,000	41	569	12	0	99	39
BRUNEI	6,000	16	52	0	3	6	0
VIETNAM	484,000(3)	1935	1500	? (4)	11	43	201
MYANMAR	435,000	231	385	0	6	22	121
LAOS	29,000	55	70	?	0	0	26
KAMPUCHEA	139,000	110	240	0	0	0	24

(1) including reserves

(2) including armoured reconnaissance vehicles

(3) in addition, there are 3-4 million reserves

(4) Vietnam has 2,300 artillery pieces of different makes, including unspecified numbers of 155mm and 175mm howitzers.

Source: The Military Balance 1998-1999 (London: International Institute of Strategic Studies, 1998)

By 1998 (immediately after the 1997 regional economic crisis), the situation had changed. ASEAN had expanded to include Brunei (which joined in 1984), as well as Vietnam, Myanmar, Laos and Kampuchea. A cursory comparison will indicate an increase in all

categories, such as military personnel, tanks, armored personnel carriers (APCs), medium-range howitzers, missile-armed naval vessels, combat helicopters and combat aircraft.

This phenomenon, namely, the concerted regional arms build-up, has caused some to express concerns about the prospects of an arms race in the region.<sup>3</sup> However, security planners and decision-makers in the region argue that this is merely a process of arms modernization, pointing to the antiquated nature of many of the weapons systems in their existing force structures, which were inherited from their former colonial masters.<sup>4</sup>

Yet, there are examples where arms race dynamics seem to be present. For instance, the initial acquisition of F-16 combat aircraft by Singapore, then Indonesia and Thailand, as well as Malaysia's subsequent interest in acquiring an advanced strike fighter, point to the need to counter or at least not be left behind by one's neighbors.<sup>5</sup>

Is there an arms race in Southeast Asia? According to Colin Gray, there are four basic conditions for an arms race:

1. There must be two or more parties, conscious of their antagonism,
2. They must structure their armed forces with attention to the probable effectiveness of the forces in combat with, or as a deterrent to, the other arms race participants,
3. They must compete in terms of quantity and quality, and
4. There must be rapid increases in quantity and /or improvements in quality.<sup>6</sup>

Gray has pointed out that it is possible for arms races to eventually develop even in the absence of any serious political antagonisms. A fairly autonomous arms increase, undertaken for a variety of reasons, might be matched by a fairly disinterested party solely as a precautionary move, and thus spark off a cycle of close or intermittent armament interactions. Previously unacknowledged political antagonisms might then occur.

---

<sup>3</sup> See, for instance, press reports such as "Asia's Arms Race," *The Economist*, 20 February 1993, p.19.

<sup>4</sup> For instance, Malaysia's navy chief Dato Abu Bakar, in explaining the sudden urgency of Malaysia in buying submarines, dismissed the notion of an arms race with Singapore, saying that its submarine purchase was "prompted by a need to replace obsolescent assets," pointing out that some naval vessels were over 30 years old. See "Navy to Acquire Submarines," *Straits Times*, 14 October 1999, p.27, and "KL Navy Waiting for Approval to Buy Submarine," *Straits Times*, 9 May 2000, p.30.

<sup>5</sup> Tai Ming Cheung, "Shoulder to Shoulder: ASEAN Members Strengthen Ties," *Far Eastern Economic Review*, 22 March 1990, pp.25-26.

<sup>6</sup> Colin Gray, "The Arms Race Phenomenon," *World Politics*, vol.24, no.1, 1972, p.41.



Indeed, while arms races are evidently run between mutually perceived enemies, arms racing behavior, that is, a process of interactive or competitive arms acquisitions, can also be discerned among even formal allies, whether out of prestige or the need to maintain a relationship of equality. This occurs even if the impetus for military modernization comes from a variety of factors and is not aimed at any particular state.

This interactive nature of arms acquisitions, coupled with conflicting claims over territory and other issues, could result in the security dilemma, conflict spirals, heightened tensions and eventually lead to conflict, thereby destroying the very security that military modernization and arms build-ups were meant to ensure.

Tables 3 – 9 will examine the force modernization programs of key Southeast Asian states. A detailed of these programs will help to identify some general trends.

### Singapore

Singapore's economic importance and military capability rank it among Southeast Asia's middle powers despite its small size and population. Unique among the ASEAN states, Singapore has ignored the economic crisis affecting the region since 1997, and has continued its military build-up, a relentless process that began in 1965 following Singapore's independence. Singapore fears sudden political developments in the region that might require its armed forces to be used either as a deterrent, or as a means of national defence. This indicates that Singapore's leadership perceives that under certain circumstance, conflict could in fact occur, and military defence capabilities must be credible at all times. The fact that it takes a very long time to build up a military capability, especially if that military capability has to be relative to potential adversaries as well as unforeseen enemies, has meant that Singapore's military development has been continuous and sustained. This also reflects Singapore's basic insecurity as a city-state in a volatile region.

In recent years, Singapore has drawn upon the US experience in the first Gulf War, and has noted the RMA debate in the United States, which has touted the new information, sensing, precision attack, stealth and aerial warfare technologies employed in the Gulf as being the

precursor of a fundamental change in the way wars will be fought.<sup>7</sup> Singapore has taken note of these developments, and is paying special attention to enhancing its command, control, communication and intelligence systems in order to fully exploit the modern weapons systems that it possesses or will soon acquire. As the Chief of the Defence Force, General Ng Tat Chung, explained, “the impact of the RMA within the SAF has been most prominent in the area of Integrated Knowledge-based Command and Control ... the central idea is the superior collection and organization of knowledge to provide dominant situation awareness to all levels of command to achieve more effective command and control of forces and the precise application of effects.”<sup>8</sup>

The inventory of the Singapore Armed Forces is listed in Table 3.

TABLE 3  
SINGAPORE’S DEFENCE FORCES

Army

50,000 active troops, with 300,000 reserves

Tanks: 450 (100 Centurion MBTs, 350 AMX13 light tanks)

APCs: 1,574 (M113, Commando, AMX10P, AMX-10 PAC90, IFV 40/50, IFV 25)

155mm howitzers: 169 (38 Soltam M-71S, 16 M114A1, 45 M68, 52 FH88, 18 FH2000)

Other artillery: LG1 105mm, 120mm and 160mm mortars

Anti-Tank missiles: Milan, Armbrust, Spike

*On order*: more locally-made FH2000 52-calibre 155mm self-propelled howitzers, Bionix AFVs

Navy

Missile-equipped naval vessels: 24 (6 Victory corvettes, 6 Sea Wolf missile boats, 12 Fearless corvettes)

Submarines: 4 Challenger (ex-Swedish A12)

Minehunters: 4 Landsort minehunters

Amphibious: 4 Endurance-class LPDs, 1 Perseverance (ex-Britain) LST

*On Order*: 6 Delta-class Lafayette stealth missile frigates

Air Force

40 A4 Skyhawk fighter aircraft

37 F5 Tiger II fighter aircraft

---

<sup>7</sup> See “Preparing to Fight the Digital War,” *Asian Defence Journal*, February 1996, p.20. See also “The Future of Warfare,” in *The Economist*, 8 March 1997, pp.21-24, and George Friedman and Meredith Friedman, *The Future of War* (New York: Crown, 1996).

<sup>8</sup> As quoted in an interview published in *Asian Defence Journal*, July-August 2003, p.14.

8 RF-5E reconnaissance fighter aircraft  
7 F16A/B fighter aircraft  
42 F16C/D fighter aircraft  
20 AS550 helicopter gunships  
20 AH-64D Apache helicopter gunships  
55 transport helicopters (UH1H, AB-205A, AS-332M, AS-532UL)  
6 Chinook CH-47D helicopters  
4 KC130B air tankers  
4 KC-135 air tankers  
4 Hawkeye E2C AEW  
1 MR squadron with 5 Fokker 50  
1 RPV squadron with Searcher and Chukar 3 RPV  
SAM: Hawk, Rapier, Mistral, RBS70, Igla  
*On order*: 8 Chinook CH-47SD helicopters, 20 F16C/D fighter aircraft

Sources: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

Singapore has evidently had the political will and the funds to continue a steady military expansion program that has inexorably enabled Singapore to become the militarily most proficient, even powerful state, in Southeast Asia. Already the most sophisticated in Southeast Asia, Singapore's airforce is still the subject of continued modernization. The F16C/D Block 52 force already numbers 42, with 20 more on order. The entire A4 Skyhawk and F5E/F jetfighter force will be replaced by up to 48 fourth-generation combat aircraft, with the Eurofighter Typhoon, Dassault Rafale, F18 Super Hornet, upgraded F-15E, Block 60 F-16, and Sukhoi Su-35 all in contention.<sup>9</sup>

Separately, Singapore has been accorded observer status for the US Joint Strike Fighter program, the JSF being seen as a possible replacement for the F16C/D.<sup>10</sup> Singapore is the launch customer for the Boeing CH-47SD heavy helicopter, for which it has ordered 8.<sup>11</sup> Singapore has also started collaboration with Israel over the development of micro-satellites for reconnaissance and surveillance purposes.<sup>12</sup>

---

<sup>9</sup> Asian Defence Journal, August 2001, p.12, "Singapore: Deconstruction Forges Ahead," Jane's Defence Weekly, 27 June 2001, and David Saw, "The Current Scene – Regional Armed Forces in 2003," Asian Military Review, February 2003, p.32.

<sup>10</sup> See "Singapore: Deconstruction Forges Ahead," Jane's Defence Weekly, 27 June 2001.

<sup>11</sup> "Singapore Wants More Chinooks," Flight International, 30 June – 7 July 1999, p.19.

<sup>12</sup> Micool Brooke, "Fortress Singapore: A Key Player in Security," Asia-Pacific Defence Reporter, February 2001, p. 66. See also "2007 Target for Launch of First Singapore-made Micro-satellite," in NTU News (in-house staff journal of the Nanyang Technological University, Singapore), January – March 2002, no.43, p.1.

Its navy has seen rapid modernization in the past few years. With 6 DCN Lafayette “stealth” frigates of 3,600 tonne displacement on order, it will soon have a true blue-water capability with which to defend its sealanes of communications.<sup>13</sup> It is buying naval helicopters for both the frigates and the four formidable newly-built Endurance-class landing ship tanks (LSTs). The leading candidates, for an initial order of 6-8 helicopters, are the AS532 Cougar, SH-70(N) Seahawk and NH-90.<sup>14</sup> The four ex-Swedish submarines will be the subject of a replacement by modern submarines beginning 2005.<sup>15</sup> The candidates for replacement are said to include the German U-212 class, the new Viking class being designed for Swedish and Norwegian navies and the French-Spanish Scorpene class.<sup>16</sup>

The army has introduced the locally built Bionix infantry fighting vehicle (IFV), which will eventually replace the M113 APCs.<sup>17</sup> A recent major purchase has been the Dornier foldable bridge systems from Germany.<sup>18</sup> There are plans to buy main battle tanks (MBTs), with the front-runner said to be the French Leclerc MBT.<sup>19</sup> While locally made 52-calibre 155mm self-propelled howitzers are being procured, there also exist plans to eventually acquire multiple rocket launching systems (MRLS), the latter possibly given impetus by Malaysia’s acquisition of such systems from Brazil.<sup>20</sup>

## Malaysia

The Malaysian Armed Forces (MAF) has had vast experience in counter-insurgency warfare, having fought a stubborn communist insurgency in Malaya and the East Malaysian states for some 40 years. In addition, it had to deal with Indonesian commando infiltration and sabotage during the Confrontation from 1963 to 1965. Indeed, its jungle warfare school in Johore is widely regarded as the best of its kind in the world.

---

<sup>13</sup> “Republic of Singapore Navy Today,” Asian Defence Journal, May 1999, p.20, and David Saw, “The Republic of Singapore Navy – The State of Growth,” Asian Military Review, My 2001, p.17.

<sup>14</sup> “Singapore Progresses Naval Helicopter Project,” Jane’s Defence Weekly, 20 August 2003, p.14.

<sup>15</sup> Patrick Bright, “ASEAN – Naval Forces Overview,” Naval Forces, February 2001, p.45

<sup>16</sup> “Singapore’s Navy Takes Shape,” Asian Defence Journal, May 2003, p.12.

<sup>17</sup> “Singapore Armed with Bionix,” Jane’s Defence Weekly, 25 August 1999, p.14.

<sup>18</sup> Asian Defence Yearbook 2000-2001, p.99.

<sup>19</sup> Micool Brooke, “Fortress Singapore: A Key Player in Security,” Asia-Pacific Defence Reporter, February 2001, p. 66.

<sup>20</sup> Jane’s Defence Weekly, 27 June 2001, p.20.

However, on-going disputes with the Philippines over Sabah, the British withdrawal in 1971, the communist victory in Indochina in 1975, the US withdrawal from mainland Southeast Asia from the 1970s under the Nixon Doctrine and growing recognition of Malaysia's vulnerabilities stemming from its exceptionally long coastlines and its oil and gas fields both offshore, all contributed to a fundamental re-orientation of the MAF from counter-insurgency to conventional military capabilities.

Beginning with the PERISTA modernization program in 1979, Malaysia has made a determined effort to build up Malaysia's conventional capabilities.

Table 4 below lists the inventory of the Malaysian armed forces, indicating its growing conventional capabilities.

TABLE 4  
MALAYSIA'S DEFENCE FORCES

#### Army

80,000 military personnel, with 60-70,000 reserves

Tanks: 26 Scorpion

APC: 1,210 (KIFV, Commando, Stormer, Condor, M3 Panhard, Sibmas, AML-60/90, Ferret)

155mm howitzers: 12 FH70

Other artillery: Model 56 105mm, M102A1, light mortars, Astros MRLS

Anti-Tank missiles: SS-11, Eryx

*On order:* 211 ACV-300 IFVs, 22 Denel G5 155mm SP howitzers, 48 PT-91M Main Battle Tanks, AT-7 Saxhorn anti-tank missiles

#### Navy

Missile-equipped naval vessels: 2 Leiku frigates (Exocet SSM and Seawolf SAM), 2 FS1500 frigates (Exocet SSM), 4 Laksamana (Assad) missile corvettes (OTO Melara SSM), 8 Spica/Combattante II missile boats (Exocet SSM)

Minehunters: 4 Lerici minehunters

*On order:* 6 Meko A-100 OPVs, 1 Agosta (training) submarine, 2 Scorpene submarines, 6 Super Lynx and 6 Fennec helicopters

#### Air Force

17 MiG29 jetfighters

8 F18D Hornet jetfighters

13 F5E jetfighters

25 Hawk jet trainers/ground attack

2 RF-5E reconnaissance jetfighters

9 MB-339, 52 Pilatus PC-7 trainers/ground-attack  
3 KC-130H air tankers  
4 Beech King Air B200T MR  
RPV: Eagle 150  
SAM: Javelin, Starburst, Anza  
*On order:* 18 Su-30 jetfighters, 11 A109M helicopters

Sources: various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asia-Pacific Defence Reporter, June 2003, Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

Some security analysts have commented on Malaysia's apparent concerns over Singapore's conventional military capabilities. Commenting on the arms build-up in Southeast Asia, one analyst noted that "defence planners are consequently paying close attention to the composition of their neighbours' new arsenals, and any upgrading of one is likely to be followed by an upgrading of the others".<sup>21</sup> Thus, Singapore's declaration to purchase F16 jetfighters in 1983 was followed by a similar decision by Indonesia, which was described at the time as a "costly exercise in keeping up with the Joneses".<sup>22</sup> Malaysia then considered buying Tornado fighter-bombers, but eventually settled on a mixed F18 Hornet and MiG-29 jetfighter purchase in 1994.<sup>23</sup> Defence Minister Tun Najib was then able to declare that Malaysia was now "on an equal standing with its neighbours in terms of military strength".<sup>24</sup>

The economic crisis of 1997 resulted in Malaysia putting on hold plans to buy air refueling aircraft, helicopter gunships, AEW aircraft, submarines, Main Battle Tanks (MBTs), new Armoured Personnel Carriers (APCs), modern artillery (including multiple rocket launching systems) and had a requirement for some 27 Offshore Patrol Vessels (OPVs). Security analysts have commented that many of these planned purchases are aimed, at least partially, at countering similar capabilities that Singapore possesses.<sup>25</sup>

With economic recovery in sight, Defence Minister Najib announced in February 2002 that Malaysia would resume its arms modernization programme. He announced that Malaysia

---

<sup>21</sup> Sanjiv Prakash, "New Teeth, New Words," Defence and Foreign Affairs, November 1990, p.14.

<sup>22</sup> Defence and Foreign Affairs, April 1986, p.32.

<sup>23</sup> Radio Moscow World Service (Moscow, in English), 1110 GMT, 13 June 1994, in BBC/SWB FE/2023 B/5 (11), 16 June 1994.

<sup>24</sup> Asian Defence Journal, August 1994, p.86.

<sup>25</sup> For instance, according to Jane's Defence Weekly, the acquisition of a mid-air refuelling capability "appears aimed at balancing neighbouring Singapore's fleet (of air refuelling tankers)." See "Malaysia Chases Others in Refueling Capabilities," Jane's Defence Weekly, 22 January 1997, p.12.

would spend RM1 billion to buy 48 new Polish-made T-91 Main Battle Tanks.<sup>26</sup> This was followed, in April 2002, by the signing of a RM300 million deal to buy Steyr assault rifles and mobile military bridges.<sup>27</sup> In addition, they have ordered 211 Turkish-made Infantry Fighting Vehicles (IFVs).<sup>28</sup> The army has also made some huge strides in improving its artillery capabilities with its order for South African-made Denel G5 155mm self-propelled artillery and Brazilian-made MRLS systems.<sup>29</sup> In May 2003, Malaysia placed an order for 18 Sukhoi SU-30 jet-fighters for RM6 billion.<sup>30</sup> This may be followed by the purchase of Russian-made Mi-17 helicopters, although an order for 11 Agusta 109M surveillance helicopters was placed in October 2003.<sup>31</sup> There may also be a follow-on order for F18 Super Hornets to replace the current 8 F18 Hornets but political sensitivities following US military action in Iraq could make this difficult. The locally built Eagle UAV is also about to enter production.<sup>32</sup> In June 2003, Malaysia announced that it will spend US\$1 billion to acquire at least 4 Airborne Warning and Control (AWAC) aircraft, with the leading contenders, in order of cost, being the Boeing 737 AEW&C, the Grumman E-2C Hawkeye and the Brazilian Embraer EMB-145.<sup>33</sup>

Naval modernization has also proceeded apace. In June 2002, Malaysia signed an agreement to buy 2 French-made Scorpene submarines and an Agosta training submarine for RM3.4 billion.<sup>34</sup> Malaysia will also soon begin building 6 Meko OPVs, a fleet which will eventually number 27.<sup>35</sup> It has also placed an initial order for 6 Super Lynx and 6 Fennec naval helicopters. The navy is also asking for Landing Platform Docks (LPDs) in consideration of Malaysia's active overseas peacekeeping operations.<sup>36</sup> The resumption of the arms modernization programme clearly suggests a strong determination to develop an all-round modern conventional capability.

---

<sup>26</sup> Straits Times, 9 April 2002, p.A8.

<sup>27</sup> Straits Times, 10 April 2002, p.A7.

<sup>28</sup> Asia-Pacific Defence Reporter, June 2003, p.53.

<sup>29</sup> Straits Times, 30 October 2000, p.25.

<sup>30</sup> Straits Times, 20 May 2003.

<sup>31</sup> Asian Defence Journal, September 2003, p.9, and "KL Signs \$220 Million Deal for 11 Army Choppers," Straits Times, p.A15.

<sup>32</sup> Asian Defence Journal, July 2001, p.16.

<sup>33</sup> Straits Times, 3 June 2003.

<sup>34</sup> New Straits Times, 6 June 2003, and Asia-Pacific Defence Reporter, June 2003, p.52..

<sup>35</sup> Patrick Bright, "ASEAN – Naval Forces Overview," Naval Forces, February 2001, p.48.

<sup>36</sup> Asian Military Review, May 2001, p.8, Asian Defence Journal, April 2003, p.12, and Asia-Pacific Defence Reporter, June 2003, p.53.

The end-result of the renewed arms modernization drive will be a more proficient MAF with enhanced maritime security and power projection capabilities. Indeed, these capabilities are important because patrolling the long coastlines and defending extensive maritime territories have presented daunting security challenges, particularly since the US retrenchment from the region after the end of the Vietnam War. The East Malaysian states are about 600 km from West Malaysia at the closest point and some 2,200 km at the most distant. These have been complicated by the potentially serious boundary disputes around the Spratley Islands, the presence of important offshore oilfields, increased concern over acts of piracy in the environs of the South China Sea and the Straits of Malacca, as well as refugee and migrant inflows, notably illegal immigrants from Indonesian and refugees from the conflict in the southern Philippines.

The contiguity with a number of ASEAN states (sharing land and/or sea borders with Thailand, Brunei, Indonesia, Singapore and the Philippines) and the presence of territorial disputes with all of its neighbouring states have added to the security challenges facing Malaysia. Whilst Malaysia would like to be prepared for all contingencies, the myriad security challenges that Malaysia faces thus provides a greater impetus for defence modernization and power projection capabilities than any singular obsession with Singapore.

### Thailand

Thailand, the so-called frontline state, undertook a comprehensive military build-up in the aftermath of the communist victories in Indochina in 1975. Thailand's military modernization efforts was galvanized by this event, especially as the United States had stood by and allowed the communists to achieve victory over the pro-US regimes in South Vietnam, Laos and Kampuchea. It raised immediate fears of a domino effect, with Vietnam conceivably undermining Thailand through its support of internal communist rebellion, something it could easily do using the long land borders between Indochina and Thailand. The impetus towards military modernisation was boosted by the Vietnamese invasion of Kampuchea in December 1978.

There were also domestic political factors to be considered. The violent October 1976 military coup that ended the brief era of democracy in Thai politics resulted in thousands of left-wing students taking to the jungle to join the Communist Party of Thailand in its



revolutionary struggle. Various services and constituents of the armed forces also vied for increases in their share of resources, a result of fierce political infighting and inter-service, as well as intra-service rivalries. Indeed, one general once observed that "the internal struggle in the armed forces is much tougher than war with the enemy".<sup>37</sup>

The military build-up has, over time, achieved a momentum of its own. Since the early 1990s, attention has shifted to improving the navy, which has extended its EEZ patrol capabilities, with a number of new patrol craft ordered. The acquisition of an aircraft carrier, the Chakri Naruebet (delivered in 1997), is indicative of the ambitions of Thailand in developing a blue-water naval capability that could counter India on its Indian Ocean seaboard, and Vietnam and Malaysia in the Gulf of Siam. Thailand's inventory is listed in Table 5.

TABLE 5  
THAILAND'S DEFENCE FORCES

Army

190,000 military personnel, with 200,000 reserves

Tanks: 793 (50 Type-69, 105 M48A5, 178 M60A1, 154 Scorpion, 200 M41, 106 Stingray)

APCs: 1,035 (340 M113, 162 V150 Commando, 18 Condor, 450 Type-85, 32 Shorland Mk3, 33 LVTP-7)

155mm howitzers: 218 (56 M114, 62 M198, 32 M71, 42 GHN-45/A1, 20 M109A2, 12 GC-45)

Other artillery: LG1 105mm, M101/M102 105mm, M168A2 105mm, Type 59 130mm, 81mm, 107mm, 120mm mortars

Anti-Tank missiles: TOW, Dragon

Navy

1 Aircraft Carrier (Chakri Naruebet, with 9 Harrier V/STOL fighter-bombers, 6 S-70B Seahawk helicopters)

Missile-equipped naval vessels: 16 (4 Jianghu frigates, 2 Naresuan frigates, 2 Knox frigates, 2 Rattanakosin corvettes, 3 Ratcharit missile boats and 3 Prabparapak missile boats)

Minehunters: 7

LSTs: 7

*On Order:* 2 Offshore Patrol Vessels (OPVs)

---

<sup>37</sup> Lt-Gen Harn Leenanong, former Commanding General of the Thai Fourth Army, as quoted in Asian Defence Journal, April 1985, p.15.

## Air Force

13 F5A/B jetfighters  
50 F16A/B jetfighters  
36 F5 Tiger II fighter-bombers  
34 L-39ZA training/ground attack  
3 IAI-201 ELINT  
18 OV-10C, 3 RF-5A reconnaissance aircraft  
20 Alpha jet trainers  
58 MR/ASW aircraft (various makes: P3T Orion, UP-3T, Do-228, F-27, S2F, Cessna T337 Skymaster, A-7E, TA-7C, O-1G, U-17B, N-24A Nomad)  
SAM: Redeye, HN-5A, Aspide, Blowpipe, RBS-70, Starburst

Sources: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

The Thai armed forces are presently still suffering from the effects of the 1997 economic crisis. At the same time, measures are being taken to reform the armed forces. For instance, steps are being taken to weed out endemic corruption and to make it a better-trained and more professional force.<sup>38</sup> All three services will be downsized, the army by up to 46,000 troops by 2010. While a shopping list exists for artillery, IFVs, tanks, submarines, fighter aircraft and frigates, the priority today is the restructuring of the armed forces. Instead of buying new equipment, it is concentrating on the cheaper option of either upgrading existing equipment or buying used weapons systems. For instance, instead of buying the latest F16C/D jetfighter, it has opted for another squadron of the older and cheaper F16A/B, with new AMRAAM missiles.<sup>39</sup> The existing F16s will be upgraded with new avionics.<sup>40</sup> One news report commented that an interactive element was present: "Malaysia's taste for Russian arms and its squadron of MiG-29s worry Thai air force chiefs ... the Thais are definitely concerned over losing pace."<sup>41</sup>

Elbit Systems of Israel will also upgrade Thailand's F5 Tiger jetfighters. There are plans for 80 HU-1H helicopters to be re-conditioned. The air force is acquiring very little new equipment, although new Black Hawk helicopters would be gradually purchased at a rate of 2

---

<sup>38</sup> "A Fresh Approach," Asiaweek, 19 November 1999, p.45, and "Thai Army Turning into Leaner and Meaner Force," Straits Times, 20 October 2001, p.A11.

<sup>39</sup> Straits Times Interactive <straitstimes.asia1.com.sg> 18 July 2001, and Straits Times, 22 January 2000, p.36.

<sup>40</sup> David Fullbrook, "The Royal Thai Air Force – Upgrading the Force Capability," Asian Military Review, February 2003, p.35.

<sup>41</sup> "Thailand Sees New Era of Arms Purchases," Straits Times, 24 March 2000, p.64.

a year from 2001 to 2011.<sup>42</sup> The army has also gone for used equipment having apparently all but decided to buy 160 used Swiss-made Pz68/88 tanks.<sup>43</sup> The navy, on the other hand, has gone for new albeit limited numbers of weapon systems, having placed orders for 2 new OPVs from China and plans to acquire more. It is also planning to purchase the first two of 12-20 Super Lynx naval helicopters.<sup>44</sup> While there were plans to lease, and later purchase, submarines, these plans have been held in abeyance due to the sheer cost.<sup>45</sup> The aircraft carrier, Chakri Naruebet, will however be upgraded with more landing aids and better radars.<sup>46</sup>

## Indonesia

The heightened sense of insecurity stemming from the communist victories in Indochina in 1975, as well as the poor showing of the Indonesian military in overcoming a small ill-equipped Fretilin force when it invaded East Timor in 1976 provided the impetus for military modernization, although it must be noted that this has been incremental and gradual in nature. Moreover, since the declaration of Exclusive Economic Zones (EEZs) in the 1980s, Indonesia's military modernization has concentrated on improving its maritime security. Indonesia is a far-flung archipelago, with sealanes and vast waterways to patrol, a daunting task indeed. Indonesia has thus focused its attention in recent years on developing the necessary conventional naval, air force and rapid deployment capabilities to patrol and defend its huge archipelagic waters and its EEZ.

Table 6 below shows the inventory of the Indonesian armed forces, although it must be pointed out that severe maintenance problems have meant that many weapon systems are not actually operational due to a lack of spare parts, partly as a result of the US arms embargo on Indonesia.<sup>47</sup>

---

<sup>42</sup> Asian Defence Yearbook 2000-2001, pp.112-113.

<sup>43</sup> Asian Defence Journal, July – August 2003, p.24.

<sup>44</sup> Naval Forces, February 2001, p. 48, Asian Military Review, May 2001, p.6, and May 2003, p.15.

<sup>45</sup> Asian Defence Yearbook 2000-2001, p.113, and David Fullbrook, "The Royal Thai Navy: Building the Force for the Future," in Asian Military Review, May 2003, p.16.

<sup>46</sup> David Fullbrook, "The Royal Thai Navy: Building the Force for the Future," in Asian Military Review, May 2003, pp.13-15.

<sup>47</sup> Jane's Defence Weekly, 3 September 2003, p.14, Straits Times, 5 December 2001, p.A8.

TABLE 6  
INDONESIA'S DEFENCE FORCES

Army

230,000 military personnel, with 400,000 reserves

Tanks: 455 (275 AMX13, 50 Scorpion, 130 PT-76)

APCs: 731 (AMX-VCI, Saracen, Commando, Ranger, Stormer, BTR-40, BTR-50, BRDM, AMX-10 PAC90, AMX-10P, Saladin, Ferret, VBL)

Artillery: M48 76mm, M101 105mm, LG-1 Mk II 105mm, M-38 122mm, 81mm and 120mm mortars

Navy

Missile-equipped naval vessels: 14 (6 Van Speijk frigates, 3 Fatahillah corvettes, 1 Hajar Dewantara corvette, 4 Dagger fast missile boats)

OPVs: 7 patrol frigates, 16 Parchim corvettes, 8 Lurssen 57m craft

Submarines: 2 Type 209

Amphibious: 26 LSTs

Minehunters/sweepers: 12

Air Force

2 Su-20 fighter-bombers

2 Su-27 jetfighters

14 A4 Skyhawk fighter-bombers

10 F16A/B jetfighters

12 F5 Tiger II fighter-bombers

42 Hawk jet trainers/ground attack aircraft

12 OV10F reconnaissance aircraft

3 Boeing 737-200 MR

2 KC-130B air tankers

26 Super Puma helicopters

63 transport aircraft (various makes: C130, L100-30, B-707, Cessna 207, Cessna 401, C-402, F27-400M, F28-1000, F28-3000, NC-212, Skyvan, CN-235-110)

SAM: Rapier, RBS-70

Source: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

In 1997, an agreement to purchase 12 SU-30K fighter-bombers and 8 Mi-17 helicopters was signed with Russia. This was subsequently cancelled due to the economic crisis. In May 2002, both countries, however, agreed to continue to cooperate in defence and trade through a

counter-trade system.<sup>48</sup> In 2003, on a visit to Russia, President Megawati agreed to the initial purchase of 2 SU-20, 2 SU-27 fighter-bombers and 2 Mi-35 helicopters to upgrade the air force. Indonesia hopes to purchase up to 48 SU-20 and SU-27 jetfighters by the end of the decade, although funding is clearly be an issue.<sup>49</sup> The initial deal would be paid for partly with commodities such as palm oil, coffee and rubber, with the deal said to be worth US\$192 million. This deal has been mired in controversy, with charges that it violated defence and budgetary laws as well as banking procedures. Various anti-Megawati elements in Parliament have announced a special team to investigate the purchase for alleged irregularities, dubbing the episode as “Sukhoigat”.<sup>50</sup>

For its size, Indonesia has appeared relaxed in its defence build-up. Although it is clear that Indonesia would not want to lag behind Singapore's military capabilities, it has not felt sufficiently threatened by it to embark on a concerted programme to redress a perceived military imbalance. In comparison with its neighbours, Indonesia devotes the lowest percentage of its GDP, about 1.5% on average, on defence in the 1990s, which demonstrates its preoccupation with internal security and also its philosophy of security through economic development.<sup>51</sup>

The Indonesian armed forces has few resources for modernization given the current political and economic climate in the country. However, the construction of a major naval base at Teluk Rate in southern Sumatra is proceeding. The Indonesian marine corps is also set to almost double in size from 13,000 to 23,000 in the near future.<sup>52</sup> The emphasis, once funding can be found, will be on naval modernization and expansion, with plans for new LSTs to support the expansion of the marine corps. The navy is also aware of the need to improve EEZ protection and to counter piracy. There are thus also plans for new patrol boats and OPVs to be procured.<sup>53</sup> The Indonesian military also announced, in September 2003 that it planned to buy 2 submarines, 4 destroyers and 2 minesweepers between 2005 and 2011, although it is not clear where the funding would come from.<sup>54</sup> Apart from these limited plans and aspirations, funding for any major military modernization program will remain tight in

---

<sup>48</sup> “To Sukhoi or Not to Sukhoi,” *Indonesia Digest*, No.24.03, 6 July 2003.

<sup>49</sup> *Asia-Pacific Defence Reporter*, June 2003, p.11.

<sup>50</sup> *Straits Times*, 5 July 2003.

<sup>51</sup> *Straits Times*, 15 September 1994.

<sup>52</sup> *Asia-Pacific Defence Reporter*, February-March 2000, p.29.

<sup>53</sup> *Naval Forces*, February 2001, p.48.

<sup>54</sup> “Jakarta Warships Plan to Give Navy New Life,” *Straits Times*, 20 September 2003, p.A16.

the foreseeable future. This is due to the ongoing economic problems in Indonesia and also to the declining prominence of the military, which has lost its dominant position in the political life of the country in the post-Suharto era.

## Myanmar

The situation of almost benign neglect of the military under General Ne Win changed when the military took power in 1988. Soon after this, it implemented an ambitious program of military modernization and arms procurement in order to address various weaknesses, such as a lack of modern weapons systems and the small size of the armed forces.

Myanmar's military inventory is listed below in Table 7. It is clear that despite the massive military modernization and expansion program launched after 1988, it has been a quantitative, not qualitative expansion. The relatively small numbers of major weapons systems employed, together with their generally low level of technology, means that while Myanmar's armed forces has been greatly strengthened vis-a-vis the ethnic insurgents (indeed, it has managed to finally pacify or defeat even the largest groups, such as the Karens), it is paradoxically weak compared to its neighbors. This indicates that Myanmar's defence priorities are mainly internal; regime survival in the face of domestic political opposition is the prime objective of this build-up.

TABLE 7  
MYANMAR'S DEFENCE FORCES

### Army

350,000 military personnel

Tanks: 205 (100 Type-69, 105 Type-63)

APCs: 440 (Ferret, Humber, Hino, Mazda, Type-85, Type-90)

Artillery: M-1948 76mm, M-101 105mm, M46 130mm, Soltam 155mm, mortars (81mm, 82mm, 120mm)

SAM: HN-5A, SA-16

### Navy

Missile-equipped naval vessels: 6 Houxin fast missile boats

OPVs: 4 frigates, 10 Hainan patrol boats, 3 PB-90 patrol boats

*On Order:* 3 corvettes

## Air Force

60 F-7/FT-7 fighter-bombers / training aircraft  
22 A5M fighter-bombers  
10 Super Galeb G4 trainer/counter-insurgency  
21 PC-7/PC-9 trainer/counter-insurgency  
18 Mi-2 armed helicopters  
11 Mi-17 armed helicopters  
*On Order:* 10 MiG-29 jetfighters

Sources: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

Myanmar has clearly made efforts to expand its conventional capabilities, but this has to-date been clearly limited to weapon systems it can obtain cheaply. For instance, it has used rice to barter for 20 130mm artillery pieces from North Korea.<sup>55</sup> It has bought cheap weapons systems from China, but has opted recently to build three frigates in Myanmar using Chinese hulls and Israeli electronics.<sup>56</sup> Myanmar has also decided to upgrade its Chinese-built F7 jetfighters with Israeli avionics.<sup>57</sup> Attempts in recent years at self-sufficiency has yielded results in that its arms industries are now able to produce light weapons, light armored vehicles, land-mines, mortars and ammunition.<sup>58</sup> It is also evaluating the purchase of heavy helicopter gunships such as the Mi-24 Hind, which is clearly aimed at dealing with ethnic insurgents.<sup>59</sup>

One interesting break from its internal focus has been the evident alarm at Thailand's conventional capabilities, especially in the light of recent bilateral tensions and border disputes. Myanmar has thus purchased a squadron of 10 used MiG-29 jetfighters, the purpose of which is to counter Thailand's F16 jetfighters. Other reasons advanced include prestige and national pride, the dissatisfaction with the performance of Chinese-built jetfighters and the perceived need to balance China's influence.<sup>60</sup>

---

<sup>55</sup> Jane's Defence Weekly, 5 August 1998, p.19.

<sup>56</sup> Asian Defence Journal, March 2003, p.7.

<sup>57</sup> Asia-Pacific Defence Reporter 1999 Annual Reference Edition, p.23.

<sup>58</sup> Asian Defence Journal, March 2003, p.6.

<sup>59</sup> Asia-Pacific Defence Reporter, February 2002, p.20.

<sup>60</sup> Asia-Pacific Defence Reporter, February 2003, pp.22-23.

## Vietnam

The conclusion of the Vietnam War in 1975 actually increased Vietnam's military capabilities, given the vast amounts of US war material in the South which fell into the hands of the communist forces. The collapse of the Soviet Union in 1992 was to have a major impact on Vietnamese-Soviet relations. Given its dependence on the Soviet Union, Vietnam's defence and foreign policies were invariably affected. The cut-off of an assured supply of ammunition, spares and equipment at cheap or nominal prices seriously hampered its ability to continue its military operations in Kampuchea. Moreover, Vietnam realized that it could not win the war in Kampuchea, given the stalemate there and the cost in Vietnamese lives and resources. As early as 1987, it announced a military reduction program, with the army to be reduced by half its size through demobilization. Vietnam further promulgated a new national security doctrine in 1987. Under the new doctrine, the past focus on the forward deployment of forces in Laos and Kampuchea was replaced by an inward-looking defence policy.<sup>61</sup> This paved the way for the Kampuchea peace accord of 1991, which led to rapprochement with ASEAN and its entry into that body in 1995.

Vietnam's order of battle is shown in Table 8 below.

TABLE 8  
VIETNAM'S DEFENCE FORCES

### Army

412,000 military personnel, with 3-4 million reserves

Tanks: 1,935 (45 T-34, 850 T-54/55, 70 T-62, 350 Type-59, 300 PT-76, 320 Type 62/63)

APCs: 1,780 (1,100 BTR, 80 YW-531, 100 BRDM, 300 BMP, 200 M113)

Artillery: 2,300 pieces of various types, including M114 155mm, 2S3 152mm and M107 175mm.

Anti-tank missiles: AT-3 Sagger

SSM: Scud B/C

### Navy

Missile-equipped naval vessels: 13 (1 Type 124A corvette, 8 Osa II and 4 Tarantul missile boats)

OPVs: 5 Petya corvettes, 10 torpedo craft

Minehunters/sweepers: 10 (Soviet and PRC)

---

<sup>61</sup> Asian Defence Journal, October 1998, pp.24-25.



LSTs: 6

Submarines: 2 DPRK Yugo (midget submarines)

*On Order*: BPS 500 missile boats (with SSN-25 anti-ship missiles)

### Air Force

53 Su-22 fighter-bombers

36 Su-27 fighter-bombers

124 MiG-21 jetfighters

26 Mi-24 helicopter gunships

4 Be-12 MR aircraft

15 Ka-25/28/32 ASW helicopters

SAM: SA-2/ -3/ -6/ -7/ -16

Source: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

The diminished state of Vietnam's armed forces compared to the immediate aftermath of the Vietnam War indicates Vietnam's current economic priorities and also the generally benign state of its immediate strategic environment. Vietnam has not engaged in a major military modernization or expansion program in the 1990s on the same scale as Singapore, Malaysia, Thailand and Myanmar, although Vietnam is aware of its military deficiencies and is making an attempt at redressing them. This is especially in terms of its ability to defend its maritime resources. Vietnam produces some 14 million tonnes of oil a year from its offshore oil platforms.<sup>62</sup> Naval clashes with China over the Spratleys in the 1990s highlighted the need for a credible naval capability. Although it wants a settlement on the Spratleys issue, it is also ensuring it does have the means of defending its claims, in the form of new missile boats, corvettes and SU-27 jetfighters.

Its Petya-class corvettes have recently been refitted, and midget submarines procured from North Korea.<sup>63</sup> There are plans to purchase new frigates, patrol craft and fast missile boats, all to be delivered by 2010. Indeed, new KBO2000 corvettes displacing 2,000 tonnes and armed with SSN-25 missiles have been ordered from Russia. 6 new 530-tonne BPS500 fast missile boats armed with SSN-25 missiles are under construction.<sup>64</sup> The air force's large force of 124 MiG21 jetfighters are being upgraded by Russia, while the SU-27 force was

---

<sup>62</sup> Gary Klintworth, "Vietnam's Offshore Capabilities Get a Boost," Asia-Pacific Defence Reporter, December 1998 – January 1999, p.6.

<sup>63</sup> Naval Forces, February 2001, p.49.

<sup>64</sup> Jane's Defence Weekly, 24 March 1999, p.15.

augmented by a recent 1998 purchase of 24 new SU-27 jetfighters.<sup>65</sup> Significantly, Vietnam has also bought unspecified numbers of Scud C missiles from North Korea in a US\$100 million deal paid partly with rice. The Scud Cs have a range of 550 km with a 770 kg payload.<sup>66</sup>

These measures are meant to redress previous neglect and do not amount to a major military expansion. Indeed, the very real poverty of the country, a lack of resources and the absence of any major benefactor means that military modernization will remain fairly modest and will not resemble the more serious expansion in some of the other ASEAN states.

### Philippines

While the rest of ASEAN has made sustained efforts since 1975 to develop their conventional warfare capabilities, the Armed Forces of the Philippines (AFP) has been preoccupied with serious internal security challenges stemming from the Communist Party of the Philippines and the Muslim Moro rebellion in the south. Another preoccupation has been political factionalism and involvement in domestic politics, a trend encouraged by Marcos and which later led to a breakdown in cohesiveness during the Aquino era from 1987. Moreover, the poor state of the Philippine economy has been a serious constraint on military modernization.

The Philippines was able to circumvent the problem of external defence through the security alliance with the United States. The huge US basing facilities at Subic Bay and Clarke Air Base provided a solid guarantee to Philippine external security and also an effective deterrent against any external threat. The subsequent withdrawal of the US from its bases in 1992 left the Philippines facing a huge security problem. It now had to provide for its own external defence, and deal with its continuing internal insurgencies, with declining US assistance and military aid. Moreover, the Philippines is a claimant to the potentially oil-rich Spratley Islands in the South China Sea, but its claim conflicts with China, Vietnam, Malaysia and Taiwan, all of which possess greater naval and air power compared to the Philippines. Moreover, as an archipelagic state, it faces the daunting task of patrolling its huge territorial waters.

---

<sup>65</sup> Jane's Defence Weekly, 6 January 1999, p.12.

<sup>66</sup> Jane's Defence Weekly, 14 April 1999, p.17.

Rather belatedly, President Ramos signed the Armed Forces Modernization Bill on 23 February 1995, in which the air force and the navy would get priority. The total cost of the program is expected to be US\$2 billion in the first five years and an estimated US\$10 billion for the following ten years. The program would emphasize the upgrading of facilities and the purchase of new weapons systems.

The current inventory of the Philippine armed forces is found in Table 9 below.

TABLE 9  
DEFENCE FORCES OF THE PHILIPPINES

Army

66,000 military personnel, with 175,000 reserves

Tanks: 65 Scorpion

APCs: 520 (85 YPR-765 PRI, 100 M-113, 20 Chaimite, 100 V-150, 150 Simba, 30 LVTP-5, 55 LVTP-7)

Artillery: 392 M-101, M-102, M-26 and M-56 105mm, M-114 and M-68 155mm

Navy

OPVs: 1 frigate and 13 offshore patrol boats

LSTs: 7

Air Force

14 F5A / F5B

55 Bell UH1H helicopters

12 AUH-76 helicopter gunships

20 MD 520MG light helicopters

1 F27 MR aircraft

20 OV-10 Bronco COIN/recce

RPV: 2 Blue Horizon II

Sources: Various, including The Military Balance 2003-2004 (London: International Institute of Strategic Studies, 2003), Asian Military Review, February 2001, Asian Defence Journal (various issues) and Jane's Defence Weekly (various issues).

However, the 1997 economic crisis and an upsurge in attacks by communist and Muslim insurgents forced a change in priorities. It was thus not until August 1999 that the

modernization program officially commenced. Even then, it was clear very little money was available for actual weapons purchases. In 1999, the Philippines resumed large-scale military exercises with the US, with the ratification of the Visiting Forces Agreement (VFA). With this, the Philippines is now able to access discarded or surplus US equipment under the US Excess Defence Articles (EDA) program, for instance, UH1H helicopters, S70 Black Hawk helicopters, UAVs and coastal patrol vessels. Perry-class and Knox-class frigates may in future also be refurbished for the Philippine Navy.<sup>67</sup> There exist plans to acquire 18-24 second-hand F5E Tiger jetfighters, possibly from Taiwan. A small squadron of 3 modern maritime patrol aircraft has also been officially identified as an important priority.<sup>68</sup>

### **Trends in Force Modernization Programs**

A number of trends in regional force modernization programs can be identified. They include increasing technological sophistication, a trend towards the diversification of sources, the introduction of new capabilities, the emphasis on protecting economic resources (particularly maritime resources) and a trend towards competitive arms acquisitions.<sup>69</sup>

#### Technological Sophistication

Clearly Southeast Asian armed forces are becoming more and more technologically sophisticated, as can be seen in the types of weapons platforms and systems being acquired. Greater emphasis is being placed on the acquisition of “smart” weapons systems, including guided munitions. In addition, some Southeast Asian armed forces are also investing in command, control, communications and computer processing, as well as intelligence, surveillance, reconnaissance systems (the so-called C4-ISR) that will allow their armed forces to operate not as disparate single services, but as joint forces integrating air, land and naval power. Singapore, for instance, has a Ministry of Defence headquarters complete with hardened underground operations control center at Bukit Gombak, which is linked through

---

<sup>67</sup> Asian Defence Journal, July 1999, p.62, and Asian Defence Yearbook 2000-2001, p.114.

<sup>68</sup> World Defence Almanac 2002-2003 (Military Technology, Vol.27, Issue 1, 2003), p.306.

<sup>69</sup> Many of the trends in arms modernization in the region, and their causes, were first identified by Desmond Ball in his seminal article in 1993, one which has stood the test of time in that the same trends and causes remain relevant to a large extent even today. See Desmond Ball, “Arms and Affluence: Military Acquisitions in the Asia-Pacific Region,” International Security, vol.18, no.3 (Winter 1993/94),

microwave and fiber-optic channels to an island-wide command, control, communications and intelligence network.<sup>70</sup>

Technology answers the problem of technological obsolescence which all Southeast Asian armed forces have had to face. Southeast Asian states, with the exception of Thailand, are former colonies and inherited their military hardware from their former colonial masters when they became independent after 1945. By the late 1970s, operating and maintaining such hardware was becoming a serious problem, as metal fatigue and the lack of spare parts made existing military hardware very difficult to operate.

The post-Cold War proliferation of sophisticated weapons systems have included multi-role fighter aircraft, maritime reconnaissance aircraft, modern missiles (including anti-ship missiles, beyond visual range air-to-air missiles, air-to-ground missiles, tactical ground-to-ground missiles), modern artillery systems, submarines and warships equipped with the latest electronics and anti-ship missiles. Indeed, the advent of weapons systems such as Scud missiles, late-model MiG29, F16, F18 and Su27 jetfighters, MRLS systems, and modern frigates armed with Harpoon and Exocet missiles has changed the strategic landscape. They have raised fears of a regional arms race as well as mutual tensions, given that the ongoing military modernization has given states in the region conventional strike capabilities they did not previously possess.

Yet, despite evident efforts at military modernization, regional arms modernization programs must be seen in proper perspective. Not many states in Southeast Asia are ready to adopt the so-called Revolution in Military Affairs (RMA), which is predicated upon information technology, the telecommunications revolution, stealth technology and precision-guided munitions. Countries in the region generally do not have the economic resources, military budget, nor the technological capability and trained manpower to acquire the full suite of RMA technologies. To embark on the path of RMA, armed forces must also undergo fundamental doctrinal, logistical and organizational changes, as well as acquiring relevant equipment, which they are in the main not prepared to.

---

<sup>70</sup> Cited in Desmond Ball, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," International Security, vol.18, no.3 (Winter 1993/94), p.94.

Pragmatism demands the use of limited resources to protect economic resources, especially offshore maritime resources. However, the information collection and surveillance capabilities that is the hallmark of modern RMA technologies may be relevant to countering illegal migration, piracy or even drug trafficking, problems which are prevalent among some regional countries. Moreover, states in the region are conscious of military technological developments and want to stay on the 'learning curve'. There is thus varying degrees of interest in the technological aspects of the RMA.

Among countries in the region, Malaysia has expressed the interest to acquire new information-based systems, but inter-service rivalries and budgetary constraints have impaired the ability of the armed forces to embrace fully the required organizational and doctrinal changes. Still, the Malaysian armed forces has improved incrementally and appears determined to at least stay on the learning curve and be able to use some RMA-type technologies to counter Singapore's growing superiority.

Indeed, it is Singapore which perceives the RMA as a solution to external conventional threats. Technology seems to be the solution to the problem of lack of size. RMA-type technologies are also a force-multiplier that can offset the country's lack of strategic depth and limited resources. Moreover, Singapore has a population which is literate and technologically disposed to adapt the RMA.

### New Capabilities

Southeast Asian armed forces are also in the process of introducing new capabilities, where none existed before. There have been a number of notable trends. Firstly, the majority of Southeast Asian land forces have traditionally been trained for anti-guerrilla operations, but the collapse of some of the region's major insurgency movements has meant a shift towards conventional capabilities. Thailand is today a major conventional land power on mainland Southeast Asia, whilst also possessing quite substantial airpower and a growing blue-water capability. The Malaysian and Singapore armed forces have, or are in the process of acquiring, very modern artillery systems such as multiple rocket launching systems (MRLS) and self-propelled 155mm howitzers. The latest MBTs may soon make an appearance in their inventories, with Malaysia finally making its long-awaited purchase of Polish T72 tanks and Singapore said to be interested in French Leclerc and other similar MBTs. Singapore

also introduced advanced AEW systems in the form of E2C Hawkeyes, in the late 1980s, with Malaysia now said to be evaluating similar systems. Vietnam has introduced tactical medium range-land missile systems in the form of Scud Cs which it acquired from North Korea.

Secondly, given the far-flung nature of federal and archipelagic states such as Malaysia, Indonesia and Philippines, it is not surprising that various armed forces have also enhanced their rapid deployment capabilities. Indonesia is expanding the size of its marine corps from 13,000 to 23,000.<sup>71</sup> Malaysia has set up a Rapid Deployment Force in 1989, which is supposed to gradually grow to a division-size force. Apprehension over possible regional instability has also seen Singapore set up its own rapid deployment division, equipped with helicopter, armor and artillery assets.<sup>72</sup> These developments indicate the growing emphasis among regional armed forces on quick deployment and intervention capabilities.

Thirdly, states have also been acquiring new capabilities to make their existing armed forces better balanced. For instance, the navies of the region have been deficient in several important capabilities throughout their existence, for instance mine counter-measures, maritime surveillance, offshore patrol and anti-submarine capabilities. These deficiencies are currently being addressed through the acquisition of mine counter-measures vessels, maritime patrol aircraft, OPVs and anti-submarine weapons systems. Thailand has been building up a blue-water capability, which has seen the purchase of an aircraft carrier. Singapore's navy will also soon make the transition from a coastal patrol force to a true blue-water navy when its six 3,600-tonne Lafayette frigates are delivered.

Fourthly, the air forces of the region have also improved dramatically in the last decade. The air forces of Singapore, Thailand and Indonesia operate F16s, with Singapore operating late-model Block 52 F16C/Ds, some with Israeli-derived suppression of enemy air defence (SEAD) capabilities. Malaysia and Myanmar operate MiG-29s and Vietnam, Indonesia and Malaysia has purchased the air-superiority SU-27 / SU-30. There is thus a notable trend towards the acquisition of advanced fighter aircraft. Indeed, Singapore is likely to be the first in the region to introduce fourth-generation jetfighters as it seeks up to 48 aircraft to replace

---

<sup>71</sup> Asia-Pacific Defence Reporter, February-March 2000, p.29.

<sup>72</sup> Anthony Spellman, "Rapid Deployment Forces on Horizon for Malaysia, Singapore," Armed Forces Journal International, April 1991, p.36.

its A4 Skyhawk and F5E/F Tiger jetfighters; the aircraft being considered include the latest Eurofighter Typhoon, Dassault Rafale and SU-35 jetfighters.<sup>73</sup>

### Competitive Arms Acquisitions

Within the region, a competitive or interactive action-reaction phenomenon is reflected in competing arms acquisitions. Malaysia's reaction to the initial acquisitions of F16s by Thailand, Indonesia and Singapore was to consider acquiring the advanced multi-role Tornado; it has since purchased MiG-29s, F/A-18s and more recently, the SU-30 fighter-bomber. Malaysia's attempts to acquire the similar capabilities to Singapore is said to have given impetus to its recent decision to purchase French-made Scorpene submarines. Myanmar's recent acquisition of MiG-29 jetfighters is also a surprising development given that Myanmar's security perspectives have traditionally been inward looking. One of the reasons has been the perceived need to counter Thailand's F16 capabilities, in the context of continuing bilateral tensions over border disputes.

It is important to note that there are a complex set of factors which explain arms purchases, for instance, in the case of Malaysia and Myanmar, which undermines the notion of an arms race in the region according to the Colin Gray definition. Nevertheless, Desmond Ball has noted that these upgrading and modernization programs are proceeding in an atmosphere of uncertainty and lack of trust; uncertainty and suspicion being fueled by a relative lack of transparency in the region with respect to the long-term objectives behind current acquisition programs.<sup>74</sup>

### Protecting Economic Resources

Protecting economic resources has become the primary focus for almost all the ASEAN states. In particular, new capabilities had to be introduced in the maritime and air environments to ensure security in an era of 200nm EEZs, and also to better patrol long and vulnerable sea lanes of communications in an era of US withdrawal after the end of the Vietnam War and the end of the Cold War, as well as the increasing assertiveness of China. The emphasis on maritime air and naval capabilities has coincided with the increasing

---

<sup>73</sup> See "Singapore: Deconstruction Forges Ahead," *Jane's Defence Weekly*, 27 June 2001.

<sup>74</sup> Desmond Ball, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," p.102.



concerns over territorial disputes in the maritime environment, especially the territorial disputes in the South China Sea, which is said to be rich in mineral resources such as oil. In addition, there are increasing problems with piracy and smuggling. This emphasis on littoral security at least partly explains the acquisition of maritime patrol aircraft, for instance, as well as the renewed interest in coastal and offshore patrol vessels, which allow littoral states to more effectively patrol their coastal waters and protect their offshore economic resources.

### Diversification of Sources

While the US remains the single largest supplier of arms in the world, and while it continues to command the largest share of the arms market in Southeast Asia, that share has nonetheless been shrinking. Other suppliers, such as Britain, France, Sweden, China and Russia have increased their share of the Southeast Asian market, particularly since the end of the Cold War. The downsizing of Western and Russian force structures in the aftermath of the Cold War has meant a buyer's market, as Western arms makers have made great efforts at marketing the latest technology at relatively attractive prices. Southeast Asian armed forces have thus been able to access relatively high-technology weapons systems at relatively low prices. An indication of this new diversity and sophistication is the emergence of modern Russian weapon systems in the inventories of several Southeast Asian states, for instance, MiG-29 / SU-27 / SU-30 jetfighters in the air forces of Myanmar, Malaysia, Indonesia and Vietnam. Even Singapore has recently purchased Iгла portable surface-to-air missiles from Russia. Apart from arms suppliers from outside the region, indigenous arms industries have also grown, in countries such as Singapore, Malaysia, Indonesia and Myanmar. The armed forces of Southeast Asia have thus come to depend less on the traditional arms suppliers, and have managed to diversify their sources of modern weapons systems.

### **Causes of the Regional Arms Build-up**

There are a number of causes of the regional arms build-up in Southeast Asia.

#### Economic Growth

The sustained high economic growth of the ASEAN states from the late 1970s until the economic crisis of 1997 provided the necessary economic resources to upgrade military

capabilities. Even if the percentage of GDP spent on defence had remained more or less constant, or shown only a marginal increase, the amount of actual expenditure and hence resources devoted to defence had in fact increased simply as a result of the huge economic growth in ASEAN. Indeed, until the present economic crisis, the entire Asia-Pacific region had been the fastest-growing region in the world since the late 1970s.

A series of studies of the relationship between defence expenditure and economic growth in the ASEAN states from the early 1960s through to the late 1980s have consistently shown that there is a close and positive correlation between them.<sup>75</sup> Those with the highest rates of growth of GNP, such as Singapore and Malaysia, have had the highest rates of increase of defence spending, while those with slower economic growth, such as Indonesia and the Philippines, have had the slowest increases in defence spending.

#### The Requirements for EEZ Surveillance and Protection

The promulgation of 200-mile EEZs under UNCLOS III has generated requirements for surveillance and power-projection capabilities over resource-rich areas. Indeed, there exist disputes over the South China Sea involving China, Vietnam, Malaysia, Brunei and the Philippines. There are also concerns over increasing acts of piracy and smuggling. There is also the question of ensuring the security of the important sea lanes of communications that passes through the Straits of Malacca, given that half of the world's maritime trade passes through it. Coupled with the limited, multilateral framework for security in the Asia-Pacific, and the withdrawal of the US from Subic Bay in 1992, all littoral states in the region have felt the need to invest heavily in building up their navies and maritime capabilities.

#### Inter-State Tensions in the Region

Smaller states in the region are wary of domination by regional powers. The great power potential of China, India and Japan have often been mentioned. But a more salient factor may well be the continued presence of severe inter-state tensions within even Southeast Asia,

---

<sup>75</sup> Cited in Desmond Ball, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," p.80.

a factor which has been the focus of recent academic discussion.<sup>76</sup> These studies have focused on the potential for conflict between states in the region over maritime boundaries, disputed territory, fisheries disputes, border conflict over refugees and alleged support for domestic rebellion.

### Internal Security

Myanmar, Indonesia and the Philippines are evidently concerned with internal security, given the salience of armed rebellion in these countries.<sup>77</sup> Myanmar has in the last decade engaged in a massive quantitative expansion of its armed forces chiefly in order to deal with internal rebellion and dissent. The armed forces of Indonesia and the Philippines are also similarly concerned with archipelagic security and dealing with internal rebellions along their peripheries. For these reasons, none of the three have invested in the full suite of RMA technologies although they are interested in the surveillance and reconnaissance capabilities of the RMA which they believe would better enable them to maintain internal security.

What is interesting is that of late, both Malaysia and Singapore have renewed their interest in internal security capabilities. The events of 11 September in the US, the evident rise of militant Islam and the influence of pan-Islamic militant ideology in the region as shown by a string of violent incidents involving militant Muslims in Malaysia, Indonesia and the Philippines in recent years, have caused both countries to re-evaluate their security priorities. Hence, Malaysian Defence Minister Tun Najib has now called for the armed forces to be prepared for low-intensity conflict and urban warfare (i.e. to be better equipped to handle terrorist attacks), while Singapore has promulgated “Homeland Defence,” which it intends to gradually put into place in the next few years.<sup>78</sup> These, however, do not mean a diversion away from conventional defence capabilities as inter-state tensions remain salient in various parts of Asia.

---

<sup>76</sup> See, for instance, Andrew Tan, Intra-ASEAN Tensions (London: Royal Institute of International Affairs, 2000) and N Ganesan, Bilateral Tensions Among the ASEAN States (Singapore: Institute of Southeast Asian Studies, 2000)

<sup>77</sup> For a recent study of these, see Andrew Tan, Armed Rebellion in the ASEAN States (Canberra: Australian National University, 2000).

<sup>78</sup> See Mohamad Najib Abdul Razak, Defending Malaysia: Facing the Twenty-First Century (London: ASEAN Academic, 2001), p.83-85, and Straits Times Interactive, 5 November 2001.

## The Broadening of Regional Security Concerns

The emergence of non-traditional security issues has had the effect of broadening security concerns. Economic security involves the protection of sea lanes of communications as well as marine resources such as seabed minerals and fisheries. There is also growing concern over piracy in the South China Sea, as well as illegal smuggling of both contraband and human refugees. These have had the effect of increasing demands for resources to be put into offshore maritime patrol capabilities with the use of both maritime patrol aircraft as well as coastal patrol craft and larger OPVs that can operate helicopters.

## A Buyers' Market

The worldwide decline in arms purchases following detente in the 1970s and particularly since the end of the Cold War led European and US arms manufacturers to search for new markets. Russia has also emerged in recent years as a supplier of the latest weapons systems at bargain prices. Moreover, the new indigenous arms makers in Third World states like Brazil, China, India, South Africa and Israel, are providing stiff competition. The increasingly wealthy Asia-Pacific states thus eagerly snapped up the latest weapons systems.

The highly competitive market assured a buyers' market, with the ASEAN states demanding sophisticated weapon systems which supplier states had been reluctant to sell. Thus, by the early 1990s, states such as Malaysia were able to purchase MiG29 and F18 Hornet jetfighters, Thailand an aircraft carrier, and Singapore F16s and E2C Hawkeye AEW aircraft. Navies in the region have been able to afford to arm their combat vessels with Exocet and Harpoon anti-shiping missiles. Submarines, hitherto the preserve of the Indonesian navy, have been purchased by the Singapore Navy, with Malaysia and Thailand likely to follow. Weapon purchasers can also demand and receive technology transfers, licensed production agreements, offsets and local manufacturing of sub-components, all of which bring with them economic and technological benefits.<sup>79</sup> As a result, the power projection capabilities of the ASEAN states have increased markedly. Thailand, Malaysia and Singapore, in particular, all possess amphibious capabilities, growing naval strength and improving air forces.

---

<sup>79</sup> For instance, Russian suppliers were required to set up a joint venture service centre for MiG-29s in Malaysia as part of the jetfighter deal, and to establish ventures with Malaysian companies to produce components or provide training and maintenance services. See Michael Richardson, "Offer Offsets, Or Miss Out," Asia-Pacific Defence Reporter, October-November 1994, p.6.

## Prestige

The possession of sophisticated weapons systems is an indicator of political and economic modernization. The prestige factor has enabled armed forces in the region to press for the acquisition of some eye-catching items, such as an aircraft carrier for Thailand's navy, surely an extravagance for a developing nation which is basically a land power. F16 fighter aircraft and modern frigates serve as important national status symbols - they at least enable national armed forces not to "lose face" during multilateral or bilateral training exercises. In the context of historical Thai-Myanmar rivalries, ethnic animosities and negative mirror images of each other, it is not surprising that Myanmar also felt a need to maintain its standing with the purchase of MiG-29s.<sup>80</sup>

## Domestic Political Factors

One reason for Thailand's recent emphasis on naval acquisition programs was motivated partly by the fact that the Royal Thai Navy chose to opt out of the military junta that toppled the elected government of Chatchai Choonhavan in 1992. Indeed, the Navy tacitly supported the pro-democracy movement which erupted in the wake of military coup. The civilian government that was subsequently voted into office rewarded the Navy's non-involvement by allotting it a very large share of defence spending. This included purchasing Jianghu-class frigates and recently an aircraft carrier.

This is not the only instance where domestic structures appear to play a major role in arms acquisition policy. Indeed, Indonesia's acquisition of former East German vessels had more to do with the particular policy agenda of its Minister for Technology Habibie, who wanted to maintain high-tech strategic industries in Indonesia, than with answering any particular strategic requirement.

---

<sup>80</sup> For a study of Thai-Myanmar bilateral tensions, see Maung Aung Myoe, Neither Friend Nor Foe: Myanmar's Relations with Thailand Since 1988 (Singapore: Institute of Defence and Strategic Studies, 2002).

## Corruption

The involvement of the military in economic and commercial activities in many parts of the region has produced instances where military greed has figured prominently in many major acquisition programs.

There has been some evidence to support the argument that it is a relevant factor. In 1978, a retired Malaysian air force captain was sentenced to three years' imprisonment for soliciting a 1% commission on a US\$39 million deal to purchase 16 F5E jetfighters from the US in 1971. In 1981, the Malaysian government reopened a tender for 162 Sibmas armored fire-support vehicles following allegations from other disappointed suppliers that the specifications appeared to be rigged in favor of the Belgian company.<sup>81</sup> These examples, however, are dated, and no controversies have been reported since Mahathir took over as Prime Minister.

The corruption factor has been better documented in the case of Thailand, where military corruption was a major factor in the bloody popular uprising of May 1992. It is reported that commissions on arms sales (a common practice by arms manufacturers and dealers in selling weapon systems to Third World states) average 15-20% of any deal, which means that personal greed, not any rational need, may be a powerful driving force in some military procurements.<sup>82</sup>

The Thai Air Force's attempt in 1991 to purchase 38 Italian-Brazilian AMX fighter aircraft at US\$20 million each, twice the price on the international market, was blocked by then Prime Minister Anand Panyarachun, who was concerned with the air force's runaway spending program. It has also been alleged that arms purchases from China was accompanied by widespread graft; the China-made tanks and APCs have in fact proved to be operationally unreliable. In 1997, a plan to acquire 295 wheeled IFVs was reduced to 50 following allegations of improper bidding procedures.<sup>83</sup> There have been no recent controversies

---

<sup>81</sup> Far Eastern Economic Review, 20 October 1983, pp.50-51, and Asiaweek, 16 October 1981, p.20.

<sup>82</sup> Tai Ming Cheung, "Officers' Commission: Arms Procurement Driven by Profit Rather Than Need," Far Eastern Economic Review, 2 July 1992, p.13.

<sup>83</sup> Military Technology, March 1997, p.108, October 1997, p.135.

though, especially since steps taken in the late 1990s to weed out corruption and make the armed forces more professional.<sup>84</sup>

### **The Regional Economic Crisis of 1997**

The regional economic crisis has meant that the region's arms build-up has been slowed, with many defence contracts cancelled or put on hold.<sup>85</sup> Malaysia's defence budget faced a comparatively modest cut of US\$187 million for 1998, with plans to acquire attack helicopters, submarines, tanks and armored vehicles frozen.<sup>86</sup> Indeed, Malaysia would have ordered more Hornet and MiG-29 jetfighters as well as trainers if not for the crisis.<sup>87</sup>

Although Indonesia actually increased its defence budget for 1998 by some 17%, inflation and the weak rupiah has meant that the real budget was down by 40%. Indonesia has indefinitely postponed major arms purchases, such as the Su-30 jetfighter and Mi-17 helicopter deal with Russia and the Type 206 submarine deal with Germany.<sup>88</sup> The Thai economy was badly hit by the economic crisis, with the Thai baht losing 45% of its value. Thailand was thus been forced to cut its 1998 defence budget by some 35%, and asked the US to help reschedule the repayment of hundreds of millions of dollars owed on past purchases. Prime Minister Chuan Leekpai declared that there would be no new arms deals and that the armed forces will have to make do with what they have for the time being.<sup>89</sup> Thailand also lost a US\$74.5 million deposit on 8 F-18 Hornet jetfighters when it was forced to cancel the order.<sup>90</sup>

The Philippines has also been affected. Despite a stated 15-year modernization program, the Philippines has so far not made any major arms purchase. Indeed, modest plans to acquire 12 modern jetfighters, air defence radars and patrol vessels were deferred following the fall in

---

<sup>84</sup> See "A Fresh Approach," Asiaweek, 19 November 1999, p.45, and "Thai Army Turning into Leaner and Meaner Force," Straits Times, 20 October 2001, p.A11.

<sup>85</sup> See "Regional halt on new orders as crisis swells," Jane's Defence Weekly, 18 February 1998, pp.21-22, and "Tigers Without Teeth?" Military Technology, April 1998, pp.17-20.

<sup>86</sup> Sydney Morning Herald, 16 January 1998. See also Straits Times Interactive, 26 March 1998, and "Market Misfire: Arms Sellers Hurt as Asia Abandons Pricely Weapons," Far Eastern Economic Review, 5 February 1998, pp.22-23.

<sup>87</sup> Air Forces Monthly, July 1998, p.7.

<sup>88</sup> Straits Times Interactive, 26 March 1998.

<sup>89</sup> Gary Klintworth, "Regional Defence Budgets Slashed," Asia-Pacific Defence Reporter, April-May 1998, p.12.

<sup>90</sup> Air Forces Monthly, July 1998, p.7.

the value of the peso.<sup>91</sup> However, in November 1998, the Philippine Defence Secretary announced that it would have to fast track its plans to modernize the armed forces, citing the continuing dispute with China over the South China Sea as the reason. Indeed, he stated that “we have allowed ourselves to become so weak militarily that we cannot back up our diplomatic moves with a credible force”.<sup>92</sup> Despite this, there are still no concrete plans for actual major acquisitions. Instead, continuing economic weakness and internal insurgencies have led the Philippines to pursue upgrading and the acquisition of second-hand US equipment.

On the other hand, Singapore increased its defence budget by 5% in 1998, with plans to purchase more F16 jetfighters, submarines and modern landing ships proceeding.<sup>93</sup> This reflected its continuing concerns over potential conventional threats and the fact that the economic crisis did not badly affect the wealthy island-state.

Vietnam, Laos and Myanmar were not affected as much by the regional crisis, whilst oil-rich Brunei has the resources to ride it out. The economic crisis thus had varying effects on the arms modernization programs in the region. Even for those most deeply affected, the modernization drive has gradually resumed. Malaysia has placed a number of recent orders, as has Thailand, albeit with a focus on second-hand or reconditioned weapon systems. Indonesia has recently shown signs that it is emerging from the long period of stasis in which it has not acquired any modern arms since the mid-1990s, while the Philippines can look forward to reconditioned surplus US weapons systems in the coming years. Indeed, Malaysia has started to place orders for major weapons systems again.

## **Conclusion**

First, the question of whether there is an arms race in Southeast Asia needs to be addressed. Clearly, the situation does not comply with the four antecedent conditions for an arms race as laid down by Colin Gray. The states in the region are not openly antagonistic towards one another and have been able to achieve a measure of regional cooperation under the rubric of

---

<sup>91</sup> *Jane's Defence Weekly*, 18 February 1998, p.22.

<sup>92</sup> *Straits Times Interactive*, 13 November 1998.

<sup>93</sup> Gary Klintworth, “Regional Defence Budgets Slashed,” p.14.



ASEAN, although territorial disputes remain serious. Generally, the states in the region also have not reacted immediately to each other's purchases of modern weapons systems, although elements of it are increasingly evident in Malaysia-Singapore relations.

However, it is also obvious that what Southeast Asian armed forces are doing is not maintaining the military status quo. Clearly, the armed forces of the region are enhancing existing capabilities as well as acquiring new capabilities. There is also clearly an element of competitive or interactive arms acquisitions. In other words, while there is no arms race according to the Gray definition, there is evidence of arms racing behavior that is short of a full-blown arms race.

No one single factor can fully explain the phenomenon of military modernization and arms build-up in the region. Indeed, it is clear that a complex myriad of factors account for it, such as prestige, corruption, supply side factors, economic growth, self-reliance in the context of a perceived reduction of the US commitment to the region, new requirements arising from EEZ surveillance and protection, the impact of domestic factors, inter-state tensions and the broadening of regional security concerns. However, a regional build-up has clearly taken place and there exists the danger of arms acquisitions being perceived as threatening to neighboring states. Force modernization programs have undoubtedly lowered the threshold for actual conflict as they have provided states in the region with the force projection and conventional capabilities to use or threaten the use of force as options in resolving disputes. Indeed, analysts fear that military modernization efforts could be potentially destabilizing, especially given the presence of inter-state tensions and contentious bilateral issues.<sup>94</sup>

Fundamental dynamics also mean that the moratorium imposed by the economic crisis beginning in 1997 has been temporary. Indeed, Singapore, Brunei and Myanmar have not been affected at all, pushing ahead with their expansion plans despite the regional economic turmoil. Malaysia has resumed its military modernization and expansion plans by 2000. There is evidence that Indonesia is resuming much-needed modernization, given that its last major purchases of major weapon systems occurred in the mid-1990s. In the wider East Asian region, there have also emerged a group of countries such as Japan, South Korea, Taiwan and Singapore, which are able to harness RMA-type technologies to enhance their

---

<sup>94</sup> See Andrew Tan, *Intra-ASEAN Tensions* (London: Royal Institute of International Affairs, 2000) and N Ganesan, *Bilateral Tensions Among the ASEAN States* (Singapore: Institute of Southeast Asian Studies, 2000).

military strength. In Southeast Asia, Singapore is thus emerging as a military power in its own class, with Malaysia making efforts to keep pace.

The regional arms build-up has placed constraints on multilateral security cooperation due to its reinforcement of mutual suspicions over each other's intentions. No multilateral military alliance structure other than the Five-Power Defence Arrangements (FPDA) thus exists due to the lack of a common threat perception and the evident presence of mutual suspicions. This points to the need for arms control and other political and diplomatic measures, such as confidence-building measures (CBMs) which could lessen tensions and put a brake on the competitive arms build-up. Within the Asia-Pacific region, political measures have been put in place. An example is the ASEAN Regional Forum (ARF) which has become the primary vehicle for discussing security matters in the region. But while the ARF has been exploring various confidence-building measures in order to ameliorate the negative consequences of a regional arms build-up, it has not, to-date achieved much in terms of concrete results.

This means that some other benign third party or hegemon from outside the region must take the lead in regional confidence building. The most promising so far have been CBMs in the form of military multilateral exercises and exchanges promoted by the US, such as RIMPAC and Cobra Gold, which only the US has the resources and power to lead. On a smaller scale, the Five Power Defence Arrangements (FPDA) comprising Singapore, Malaysia, Australia, Britain and New Zealand, is the only other effective multilateral mechanism in the region. The main utility of the FPDA is its function as a useful CBM between Singapore and Malaysia. However, only Australia has the interest, capability and acceptability to take the lead in promoting it as such.

Such military-level CBMs must be expanded considerably to include more Southeast Asian states in order to enhance functional multilateral cooperation. Such cooperation has advantages that extend beyond raising operational effectiveness and inter-operability. Through exchanges, mistrust can be lowered and through multilateral cooperation, attention can be focused on common security threats, such as those emanating from regional flashpoints involving China, emerging non-traditional security threats such as arms smuggling, illegal migration and piracy, as well as humanitarian intervention and peacekeeping, such as that carried out in East Timor from 1999. In the post-11 September era, the obvious need for multilateral security cooperation to counter the threat emanating

from transnational terrorism in Southeast Asia is also an emergent factor that could provide the necessary political will towards overcoming barriers of mutual suspicions. The opportunities provided by such an impetus should not be missed.

## **References**

Air Forces Monthly

Armed Forces Journal International

Asian Defence Journal

Asian Defence Yearbook 2000-2001

Asian Military Review

Asia-Pacific Defence Reporter 1999 Annual Reference Edition

Asia-Pacific Defence Reporter

Asiaweek

Ball, Desmond, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," International Security, vol.18, no.3 (Winter 1993/94)

Ball, Desmond, "Arms and Affluence: Military Acquisitions in the Asia-Pacific Region," International Security, vol.18, no.3 (Winter 1993/94)

Bright, Patrick, "ASEAN – Naval Forces Overview," Naval Forces, February 2001

Brooke, Micool, "Fortress Singapore: A Key Player in Security," Asia-Pacific Defence Reporter, February 2001

Defence and Foreign Affairs

Far Eastern Economic Review

Flight International

Friedman, George, and Friedman, Meredith, The Future of War (New York: Crown, 1996)

Ganesan, N, Bilateral Tensions Among the ASEAN States (Singapore: Institute of Southeast Asian Studies, 2000)

Gray, Colin, "The Arms Race Phenomenon," World Politics, vol.24, no.1, 1972

Huxley, Tim, and Willett, Susan, Arming East Asia (Adelphi Paper, International Institute of Strategic Studies, London, 1999)

Indonesia Digest

Jane's Defence Weekly

Maung Aung Myoe, Neither Friend Nor Foe: Myanmar's Relations with Thailand Since 1988 (Singapore: Institute of Defence and Strategic Studies, 2002).

Micool Brooke, "Fortress Singapore: A Key Player in Security," Asia-Pacific Defence Reporter, February 2001

Military Technology

Morgenthau, Hans J, Politics Among Nations: The Struggle for Power and Peace (New York: Alfred Knopf, 1949)

Naval Forces

NTU News

Radio Moscow World Service (Moscow, in English)

Razak, Mohamad Najib Abdul, Defending Malaysia: Facing the Twenty-First Century (London: ASEAN Academic, 2001)

Straits Times

Straits Times Interactive <straitstimes.asia1.com.sg>

Sydney Morning Herald

Tan, Andrew, Armed Rebellion in the ASEAN States (Canberra: Australian National University, 2000)

Tan, Andrew, Intra-ASEAN Tensions (London: Royal Institute of International Affairs, 2000)

The Economist

World Defence Almanac 2002-2003 (Military Technology, Vol.27, Issue 1, 2003)

***IDSS Working Paper Series***

1. Vietnam-China Relations Since The End of The Cold War (1998)  
*Ang Cheng Guan*
2. Multilateral Security Cooperation in the Asia-Pacific Region: Prospects and Possibilities (1999)  
*Desmond Ball*
3. Reordering Asia: “Cooperative Security” or Concert of Powers? (1999)  
*Amitav Acharya*
4. The South China Sea Dispute re-visited (1999)  
*Ang Cheng Guan*
5. Continuity and Change In Malaysian Politics: Assessing the Buildup to the 1999-2000 General Elections (1999)  
*Joseph Liow Chin Yong*
6. ‘Humanitarian Intervention in Kosovo’ as Justified, Executed and Mediated by NATO: Strategic Lessons for Singapore (2000)  
*Kumar Ramakrishna*
7. Taiwan’s Future: Mongolia or Tibet? (2001)  
*Chien-peng (C.P.) Chung*
8. Asia-Pacific Diplomacies: Reading Discontinuity in Late-Modern Diplomatic Practice (2001)  
*Tan See Seng*
9. Framing “South Asia”: Whose Imagined Region? (2001)  
*Sinderpal Singh*
10. Explaining Indonesia's Relations with Singapore During the New Order Period: The Case of Regime Maintenance and Foreign Policy (2001)  
*Terence Lee Chek Liang*
11. Human Security: Discourse, Statecraft, Emancipation (2001)  
*Tan See Seng*
12. Globalization and its Implications for Southeast Asian Security: A Vietnamese Perspective (2001)  
*Nguyen Phuong Binh*
13. Framework for Autonomy in Southeast Asia’s Plural Societies (2001)  
*Miriam Coronel Ferrer*
14. Burma: Protracted Conflict, Governance and Non-Traditional Security Issues (2001)  
*Ananda Rajah*
15. Natural Resources Management and Environmental Security in Southeast Asia: Case Study of Clean Water Supplies in Singapore (2001)  
*Kog Yue Choong*

16. Crisis and Transformation: ASEAN in the New Era (2001)  
*Etel Solingen*
17. Human Security: East Versus West? (2001)  
*Amitav Acharya*
18. Asian Developing Countries and the Next Round of WTO Negotiations (2001)  
*Barry Desker*
19. Multilateralism, Neo-liberalism and Security in Asia: The Role of the Asia Pacific Economic Co-operation Forum (2001)  
*Ian Taylor*
20. Humanitarian Intervention and Peacekeeping as Issues for Asia-Pacific Security (2001)  
*Derek McDougall*
21. Comprehensive Security: The South Asian Case (2002)  
*S.D. Muni*
22. The Evolution of China's Maritime Combat Doctrines and Models: 1949-2001 (2002)  
*You Ji*
23. The Concept of Security Before and After September 11 (2002)
  - a. The Contested Concept of Security  
*Steve Smith*
  - b. Security and Security Studies After September 11: Some Preliminary Reflections  
*Amitav Acharya*
24. Democratisation In South Korea And Taiwan: The Effect Of Social Division On Inter-Korean and Cross-Strait Relations (2002)  
*Chien-peng (C.P.) Chung*
25. Understanding Financial Globalisation (2002)  
*Andrew Walter*
26. 911, American Praetorian Unilateralism and the Impact on State-Society Relations in Southeast Asia (2002)  
*Kumar Ramakrishna*
27. Great Power Politics in Contemporary East Asia: Negotiating Multipolarity or Hegemony? (2002)  
*Tan See Seng*
28. What Fear Hath Wrought: Missile Hysteria and The Writing of "America" (2002)  
*Tan See Seng*
29. International Responses to Terrorism: The Limits and Possibilities of Legal Control of Terrorism by Regional Arrangement with Particular Reference to Asean (2002)  
*Ong Yen Nee*
30. Reconceptualizing the PLA Navy in Post – Mao China: Functions, Warfare, Arms, and Organization (2002)  
*Nan Li*

31. Attempting Developmental Regionalism Through AFTA: The Domestic Politics – Domestic Capital Nexus (2002)  
*Helen E S Nesadurai*
32. 11 September and China: Opportunities, Challenges, and Warfighting (2002)  
*Nan Li*
33. Islam and Society in Southeast Asia after September 11 (2002)  
*Barry Desker*
34. Hegemonic Constraints: The Implications of September 11 For American Power (2002)  
*Evelyn Goh*
35. Not Yet All Aboard...But Already All At Sea Over Container Security Initiative (2002)  
*Irvin Lim*
36. Financial Liberalization and Prudential Regulation in East Asia: Still Perverse? (2002)  
*Andrew Walter*
37. Indonesia and The Washington Consensus (2002)  
*Premjith Sadasivan*
38. The Political Economy of FDI Location: Why Don't Political Checks and Balances and Treaty Constraints Matter? (2002)  
*Andrew Walter*
39. The Securitization of Transnational Crime in ASEAN (2002)  
*Ralf Emmers*
40. Liquidity Support and The Financial Crisis: The Indonesian Experience (2002)  
*J Soedradjad Djiwandono*
41. A UK Perspective on Defence Equipment Acquisition (2003)  
*David Kirkpatrick*
42. Regionalisation of Peace in Asia: Experiences and Prospects of ASEAN, ARF and UN Partnership (2003)  
*Mely C. Anthony*
43. The WTO In 2003: Structural Shifts, State-Of-Play And Prospects For The Doha Round (2003)  
*Razeen Sally*
44. Seeking Security In The Dragon's Shadow : China and Southeast Asia In The Emerging Asian Order (2003)  
*Amitav Acharya*
45. Deconstructing Political Islam In Malaysia: UMNO'S Response To PAS' Religio-Political Dialectic (2003)  
*Joseph Liow*
46. The War On Terror And The Future of Indonesian Democracy (2003)  
*Tatik S. Hafidz*



47. Examining The Role of Foreign Assistance in Security Sector Reforms: The Indonesian Case (2003)  
*Eduardo Lachica*
48. Sovereignty and The Politics of Identity in International Relations (2003)  
*Adrian Kuah*
49. Deconstructing *Jihad*; Southeast Asian Contexts (2003)  
*Patricia Martinez*
50. The Correlates of Nationalism in Beijing Public Opinion (2003)  
*Alastair Iain Johnston*
51. In Search of Suitable Positions'in the Asia Pacific: Negotiating the US-China Relationship and Regional Security (2003)  
*Evelyn Goh*
52. American Unilateralism, Foreign Economic Policy and the 'Securitisation' of Globalisation (2003)  
*Richard Higgott*
53. Fireball on the Water: Naval Force Protection-Projection, Coast Guarding, Customs Border Security & Multilateral Cooperation in Rolling Back the Global Waves of Terror from the Sea (2003)  
*Irvin Lim*
54. Revisiting Responses To Power Preponderance: Going Beyond The Balancing-Bandwagoning Dichotomy (2003)  
*Chong Ja Ian*
55. Pre-emption and Prevention: An Ethical and Legal Critique of the Bush Doctrine and Anticipatory Use of Force In Defence of the State (2003)  
*Malcolm Brailey*
56. The Indo-Chinese Enlargement of ASEAN: Implications for Regional Economic Integration (2003)  
*Helen E S Nesadurai*
57. The Advent of A New Way of WAR : Theory and Practice of Effects Based Operations (2003)  
*Joshua Ho*
58. Critical Mass: Weighing in on *Force Transformation & Speed Kills* Post-Operation Iraqi Freedom (2004)  
*Irvin Lim*
59. Force Modernisation Trends in Southeast Asia (2004)  
*Andrew Tan*